Experimental and Clinical Studies

PSYCHOSOMATIC MEDICINE

CONTENTS

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PSYCHOSOMATIC MEDICINE

EXPERIMENTAL AND CLINICAL STUDIES

Under the editorial supervision of the AMERICAN SOCIETY FOR RESEARCH IN PSYCHOSOMATIC PROBLEMS, Inc., 714 Madison Avenue, New York 21, N. Y.

PURPOSE: The aim of PSYCHOSOMATIC MEDICINE is to encourage and bring together studies which make a contribution to the understanding of the organism as a whole, in somatic and psychic aspects. The field to which PSYCHOSOMATIC MEDICINE is devoted is rapidly assuming importance in medicine and the related sciences. The traditional body-mind dichotomy, while now less present in medical thinking, is not eradicated from language. Expressions which, during the last decade, have gained increasing prominence in medical literature, such as the organismal theory, the patient as a whole, psychosomatic problems, psychophysiology, psychobiology, were all attempts to avoid the artificial division of the psychological from the physiological. It is now realized that the major problem is not to find the term or label to indicate the essential unity of the organism, or to engage in philosophical discussions about monism, dualism or parallelism, but to develop practical methods for dealing clinically and scientifically with the organism as a whole. Although the organism is a unit, fundamentally different methods have been developed for the observation and management of the psychic and somatic functions. This fact is the real reason for the use of the term psychosomatic, not any difference of opinion about the essential nature of the organism.

The ability to deal with the psychic aspect of an illness, or with the patient as a person, has been called the art of medicine in contradistinction to the science of medicine. But this association of ideas has tended to preserve a dichotomy. Most physicians would agree that there is an art and a science for dealing with physiology as well as psychology. The fact that studies relating to them tend to be isolated from each other in our scientific literature constitutes the reason for this publication.

Psychosomatic medicine is not a medical specialty, parallel with internal medicine or psychiatry, but an approach which might be applicable to almost any medical, psychological or physiological problem. The consequence is that nearly anything the Journal publishes might be suitable for one or another of the specialized scientific journals, yet its suitability for this Journal depends not only on its scientific excellence but also upon its pertinence to some specific issue involving observations or experiments on both personal reactions and organic reactions.

SCOPE: The investigations published in this Journal deal primarily with phenomena observed concurrently from somatic and psychic aspects rather than from either one alone. The scope therefore includes appropriate experimental studies of animal and human behavior, and well-controlled clinical studies of children and adults. Pertinent examples are: investigations of experimental neuroses, of frustration, of physiological changes accompanying emotion, of vegetative and hormonal disturbances, and of psychiatric aspects of general and specific emotional problems.

The Editors are not disposed to accept manuscripts which present purely psychiatric material without observations and data relative to physiological events, or material relating to any of the specialties of internal medicine which is not accompanied by sufficiently adequate observations to throw light on the psychosomatic mechanisms involved.

The Journal includes articles containing reviews of literature in the field of the medical and research specialties.

Reviews of articles and books relating to this field also are published.

MONOGRAPHS: To meet the increasing need for publication of experimental data resulting from longer studies, monographs independent of the Journal itself are published as occasion requires.

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PSYCHOGENESIS AND PSYCHOTHERAPY OF ULCERATIVE COLITIS *

J. GROEN, M.D.

Senior Physician, Head of the Second Medical Department, Wilhelmina Gasthuis, Amsterdam

INTRODUCTION

Ulcerative colitis is a serious disease in which part of the colon is covered with a large number of ulcers. In the severe cases the tissue defects may be so great that there is hardly any normal mucous membrane left between the ulcers. The clinical signs are: fever, diarrhea with admixture of blood, mucus, and pus, emaciation, anemia, dehydration, and exhaustion. The disease usually has an acute onset and a chronic or intermittent course. Therapy is difficult and largely symptomatic. Sometimes mutilating operations have seemed necessary (appendileostomy, anus preternaturalis, resection of part or whole of the colon, etc.). Unexpected cures occur as often as unaccountable aggravations. The mortality is considerable.

The cause of the disease is unknown. A bacterial agent would seem likely, on first impression. In a number of cases Hurst has been able to grow dysentery bacilli from pus taken from ulcers through the rectoscope. However, his findings proved to hold good only for a few cases of chronic dysentery. In the majority of cases they have not been confirmed. Rosenow maintained, as a result of his experiments on animals, that the disease was caused by streptococci. For a short time Bargen claimed attention by pointing to a special type of diplococcus as the cause. All these bacteria, however, have not ultimately satisfied the postulates of Koch: they were not found in all cases; they also occurred in normal individuals. The etiology of the disease remained unestablished.

In 1930 Murray drew attention to the peculiarity of character and the occurrence of psychologic conflict situations in the histories of his cases. Sullivan (1932) and his coworkers continued the work along these lines. In 1938 van der Heide was given an opportunity to interview a number of our patients with ulcerative colitis in the Wilhelmina Gasthuis at Amsterdam. He was able to demonstrate the presence of emotional disturbances in all of them. He further observed that these disturbances were of a similar nature in all these cases.

He fully confirmed Murray's observation that a specific conflict situation had immediately preceded the outbreak of the disease. The present author carried on van der Heide's investigations after his departure from this hospital. As a physician without psychoanalytic training his method of approach has been different from those of his predecessors. Yet the results so far have been in astonishing agreement with those originally obtained. It is the purpose of this paper to report on a number of cases of ulcerative colitis in which special attention was paid to the character of the patient and to the emotional situations he had gone through before the outbreak of his disease.

METHODS

The methods used in the present investigation have been the same as employed in history-taking. An attempt was made to obtain a picture of the character of the patient by taking a very elaborate anamnesis in the form of a detailed life history. A special search was made to find out what exactly had taken place in the emotional life of the patient shortly before onset or recurrence of his disease. By comparing the data thus obtained, an attempt was made to discover similarities in the character, or analogies in the emotional conflict of these people.

As the histories in these cases often went back as far as early youth, and often assumed the character of a complete biography, the method might be called *biographic anamnesis.*

The method, simple as it may seem, worked very satisfactorily. It differs from psychoanalysis in that it does not rely so much on free association. Neither does it use dream-analysis. It is the examiner who in general controls the conversation and sees that the history is related, as far as possible in chronologic order. The method is certainly too simple to be of great use in the psychoneuroses, but it proved extremely useful for the elucidation of the simpler life difficulties that lay at the bottom of the emotional conflict situations of these patients. The "biographic anamnesis" has the advantage, moreover, of being less time-consuming than an analysis.

It is hardly necessary to break a lance for history-taking as a method of scientific research. The taking of a good anamnesis requires as much training and experience as the handling of any scientific instrument. In order to use history-taking as an

* From the Second Medical Department of the Wilhelmina Gasthuis at Amsterdam.

objective method, one has to acquire the necessary training, and learn how to objectify the findings by means of a careful work-up of questions and control questions. Particularly one should make the patient feel that the sole purpose of the investigator is to listen and to understand—not to judge nor condemn. Once this training is obtained, one is able to estimate the results of the method at their true value.

It is just this knowledge of the magnitude of error which gives us the right to claim an objective value for those findings which stand the test of critical scrutiny.

THE CHARACTER STRUCTURE OF THE ULCERATIVE COLITIS PATIENT

The following outstanding peculiarities of character were observed in our patients:

1. The *intellect* is generally well developed. There are few original minds among them, but they do well at school, pass their examinations in time, etc.

2. *Carefulness and neatness,* often exaggerated, are striking features of their personalities. There is a marked tendency toward extreme "decency" in words and manners. They do not like vulgar or obscene expressions in conversation; they hate rough words and coarse jokes. The tendency towards neatness is displayed in their dress and the choice of their clothes. One may often recognize a colitis patient on the ward from the neat way he wears his pyjamas. Even in bed the patient often wears a carefully selected and adjusted flower, brooch, handkerchief, or a scarf. Some of them have a definite flair for fashion in dress. Their carefulness often merges into meticulousness. In the choice of their friends or acquaintances, they often try to associate with people of a higher social rank, thus acquiring a stamp of distinction and respectability. The female patients, in addition to being well dressed like the men, have a great sense of cleanliness. They are accurate and conscientious in the performance of their domestic duties, in the upkeep of their furniture, etc. Often they will continue their work in the household for a long time, even after the disease has considerably undermined their strength.

3. These patients are extremely *sensitive,* even *oversensitive.* They worry about rude treatment for days on end. They find it difficult to get over things of minor importance and feel gravely offended at a rude expression. Owing to their strong tendency towards "respectable behavior," they cannot (or dare not) repay in kind any insult or abusive word. But they feel ill-treated, and grieved and fret about it.

4. *They often display a hesitating, unbalanced attitude towards the value of their own personality.* On the one hand, these patients often feel inferior to others. In an introductory conversation they may even make a modest impression: they extol the virtues of others and do not like to speak ill of somebody else, "as I have so many faults myself," etc. On the other hand, it appears that they really have a very high opinion of their own qualities and inwardly are full of criticism of others. But this some of them will not or dare not express immediately. The more their confidence is gained, however, the more they dare to criticize. It is only after a deeper search that a strong *narcissism* appears to be always present, hidden in some cases, under a seeming modesty.

5. These patients are extraordinarily *egocentric.* Their social interests seldom extend beyond the small circle of their immediate environment. Political or humanitarian ideals are hardly ever present. If they do have them, they pay only lip-service to them. They are seldom prominent members of some social society or the like. They may talk about helping other people but they really *do* nothing for anybody outside of their immediate circle.

6. In general their attitude towards life is a passive one. They are usually *ambitious only in a limited degree.* If they pass their examinations in time, if their principal is satisfied with them, if they are successful within the limited range of their interests, if they can associate with people of a somewhat higher social rank, they feel quite content and satisfied with themselves. They rarely make active efforts to strive for a better position, hoping that an improvement will come from outside. They talk a lot about what they would like to do, but never do it.

7. They are *fearful,* and in imminent danger often overtly cowardly. In a difficult situation they preferably choose the path of least resistance. This attitude may be hidden under a show of manly independence, but inwardly they remain afraid and their show of courage easily breaks down. They like to lead a calm, uneventful life. If fate brings them face to face with an emergency situation, they usually retreat or fail.

8. In most, but not in all, there is a striking lack of aggressive tendencies in behavior. Sometimes these tendencies are present in their conversations about others or in their dreams, but rarely in practice. They may brag about aggressive feelings but as a rule they do not put their words into deeds. Although they gossip and complain about whom they hate, they do not fight them.

9. These patients have a great *need for love, sympathy, and affection,* harmonious surroundings full of love and attachment. They like domesticity, intimate family parties, etc. They like to have confidential talks with people who are sympathetic to them, they like a "tender" atmosphere, created by flowers, candlelight, etc. Because of this "sissy" trait, together with the lack of activity, the character becomes positively *sentimental.* One gets the impression that this *constant seeking for love and affection* (they give little!) is linked up with their doubt of the value of their own personality. It seems as if they want to receive from others, again and again, a confirmation of the value of their own personality. This explains why a harsh word, a denial of the love and care they are looking for, affects them so deeply. If they do not receive love from others they have nothing to rely on, and this makes them feel utterly helpless and unhappy.

10. The patients often have an *exaggerated, idealistic, sometimes a positively naive, infantile conception of love.* They think of love as a sublime adoration, attachment, and harmony between husband and wife. Generally they consider the bodily sexual contact as something inferior. They are unable to establish a normal harmony between their practical erotic and their ideal love-life. Owing to this, the patients are seldom capable of normal sexual relationships. Many of them never marry or marry only after long hesitation. Loss of libido or impotence frequently occurs in the male patients under the influence of some emotional disturbance. The female patients, if married, very often have never experienced a normal orgasm; frigidity preceding the onset of the disease is extremely common. In marked contradiction to the purity and idealism of their love ideal is the frequent masturbation, which is found even in adult patients.

In many cases the characters of the patients resemble those of a "spoilt child" who has never acquired the independence of action characteristic of maturity. Murray referred to this as *"the emotional immaturity"* of these patients.

11. In all our male cases the history revealed an *abnormally strong fixation on the mother, often combined with fear of the father.* This fixation on the mother continues to exist and show itself in many ways in adult life. When the mother dies, or when the patient is separated from her he often suffers abnormally strong depression and his fixation would remain. When he grows older every woman the patient comes in contact with is compared with her. There is no woman who can equal her. In a conflict between his wife and his mother, one of our patients could not detach himself from the fixation and take sides with his wife, as would be the normal attitude. In some cases another woman was used later on as a mother substitute, to whom the patient then transferred his attachment. Many of them have an "instinctive" liking for elderly ladies which they cannot explain. On the other hand, their attitude to other men is often reminiscent of the fear or hate they felt for their father.

Probably this marked mother fixation is the underlying cause of the impossibility of realizing a harmonious sexual contact when adult. The overstrong fixation on the mother prevents a normal transference of the sexual feelings to the other woman. It underlies their abnormal idealization of love in general. The passive-dependent attitude towards their mother stamps the nature of the later character. It brings them into conflicts with the father. If he happens to be a strong personality they may keep throughout their entire life a fear of every man who reminds them of their father, whether by his position or by his behavior to them. On the other hand, some of the female patients exhibited a strong fixation on the father, but they had to overcome great inhibition before they would admit their aversion of the mother.

12. *At first it is somewhat difficult to induce these patients to speak about their inner life.* In the introductory conversation the existence of a mental conflict is usually denied. Only in later conversations do they admit this, especially if they are encouraged to speak a little more about themselves. It takes, however, some time before they can or will admit that there is a connection between these mental difficulties and their physical disease. In general, they are of the opinion that one has to overcome one's difficulties alone without troubling others. Sometimes they are ashamed of not being able to manage their conflicts themselves. In all our cases it was found that they had repressed and worried a great deal more than had appeared at first.

EMOTIONAL CONFLICTS PRECEDING THE OUTBREAK OF THE DISEASE

Individuals with a character structure as described above may live for a long time without great disturbances. It is true that they are limited personalities, but disturbances need not *per se* develop. Nothing abnormal will happen so long as the external circumstances are such that they suit the patient. These individuals often do not marry, but continue to live with their mother. They feel satisfied so long as they can hang on to their

mother's skirts. It may happen that the patient does marry, but keeps having daily contact with his mother because the young couple moves into the mother's house or into a house near hers. If the partner of such a marriage puts up with this peculiar situation, all may go well. Of course, only a certain type will fit into such a relation. Sometimes the patient chooses another elderly person as a substitute for his mother to whom he remains fixed in a devoted way. This type of patient will remain apparently undisturbed so long as his special wishes and desires are indulged.

It is clear, however, that such a sheltered life may easily be upset. The mother may die, or somehow be withdrawn from the patient's fixation, so that he is left behind alone. The patient may become engaged or married to a partner who is not willing to play the part of a mother substitute and this will result in severe disappointment. This is even worse when the partner is a robust, vigorous, uninhibited personality. The impossibility of normal sexual contact will then become obvious. In other cases things go wrong even before the marriage. This was the case with some female patients of Murray, who, though entirely unfit for marriage, had become engaged to be married. The fear for what would happen was too much for these women and some days before the marriage the disease broke out. In all our patients, shortly before the outbreak of their colitis, a difficult situation that required an active solution had taken the place of the former sheltered condition. The patient, however, was not able to get out of the difficulties himself by making a decision or taking action. Sometimes the very fear of getting into a difficult situation had led to an inner conflict.

Thus, in our cases, owing to some external reason, a situation arose with which the patient could not cope and from which he could not escape. This situation resulted from an emotional trauma, which involved a combination of acute love-loss and painful humiliation. It persisted in the unconscious as long as the conflict was not solved. It was repressed because there was nobody to whom patient dared or could confess his difficult situation. This state of bereavement and humiliation which the patient could not solve by words or by actions, and which he continued to conceal, preceded the outbreak of the ulcerative colitis, usually by barely a few days. Before defining the nature of the conflict more exactly we will first describe some of our cases.

CASE HISTORIES

CASE I: This patient is a 29-year-old, Jewish, unmarried shop-clerk. He was admitted for ulcerative colitis for the first time, four years ago. His course was unimproved except for brief remissions. There were periods when he had 10 stools a day with blood and mucus. Fever was at times present. The patient developed anemia and required several transfusions. During his illness he had been in a university hospital for some time also and a mild diabetes was found. When, in 1939, he placed himself under my treatment, his colitis had just relapsed after a short remission. He had diarrhoea (to 8 stools a day) accompanied by blood, mucus, and pus. There was anemia (hemoglobin 10 gm. per cent); the evening temperature was 38.6° C. The diagnosis of ulcerative colitis was confirmed by proctoscopy and x-ray of the colon.

Biographical anamnesis: In the first session little information was obtained, but gradually a picture of his personality, of his youth, and of the recent events could be built up.

Patient's father is a robust, vigorous man. He began as a peddler, selling draper's goods to the farmers. Through great diligence and cunning in business, he succeeded in building up a large drapery and ready-made clothes shop in a provincial town, in addition to his peddling trade. Patient describes his father as a rude man, not very scrupulous in business, often using coarse words, who appeared as an egoist to his wife and children, was fond of eating, drinking, smoking, etc., and whose sole aim in life was to earn money.

Patient says that he never really liked his father because he himself is of a so much gentler nature. He takes much more after his mother, with whom he has had an ideal contact ever since childhood. He describes her as a silent, simple woman, who out of a sense of duty endured his father's rudeness, but who really was much more refined. The happiest hours patient can remember were when he was quietly at home with his mother. They needed not even say much to understand each other and they could talk so nicely about all kinds of things, about "the business," the neighbors, etc. Patient was surprised continually to find how often he and his mother had the same opinion about all kinds of persons, and "life in general."

After passing successfully through a higher-grade school, patient had entered his father's business. It soon turned out, however, that father and son did not get on very well. His father was a severe master who scolded the boy because he was not energetic enough. According to patient, this was due to the fact that he was too honest and would not, if need be, cheat his customers, as his father did. It soon appeared that patient was not suited for going on

the road, for which the art of bargaining and a certain degree of independence was required. The patient himself hated this kind of work. He felt more suited for the department of ladies' ready-made clothes in the shop. He described at great length how great a delight he took in giving advice to the ladies of the provincial town when they were fitting the dresses. He tells how easily he got on friendly terms with these ladies and how, in the fitting room, they naturally came to talk confidentially with him about all kinds of things. Because of this and also because he had a real flair for dressmaking he secured a number of customers among the ladies of the town. Patient was very proud of this because he could now show his father, who had often called him a whippersnapper and a good-for-nothing, that he could also achieve something by his own "decent" way of selling. Often, when his father was dissatisfied with his achievements at the shop, the dispute was continued at the table. His mother would not openly take his side (she dared not do so before his father), but she would look at him silently or comfort him later on. In any case he felt that she was on his side, which would greatly soothe him. He could not in turn be abusive to his father nor could he defend himself against him. He hated making a row, considering this beneath his dignity. (That he was actually afraid of his father he only admits reluctantly.)

Patient is the third of five children. His elder brother and sister had already left the parental home at an early age. One brother who is two years younger was on much better terms with his father and assisted him in serving the customers in the country and in the administration of the shop. Patient describes this brother as being much less sensitive than himself. He often goes on sprees with friends and does not care very much about his family. Patient was obviously his mother's favorite son. As an example of his own neat character, patient tells how his father and brother liked to make themselves comfortable at home in their shirt-sleeves whereas he abhorred this. His mother did not like these ill-bred manners either. There is also a sister, twelve years younger, whom the patient likes to protect and for whom he has a "brotherly" affection. He has few friends, and has never wanted them. He has never had any sexual contact with women. He considers most modern girls superficial; many of them do not behave decently; in his opinion they show too plainly that all they want is a man. He can never have a serious talk with them and he often shudders at the very thought of being married to such a girl. They are good only for dancing; he never finds them really sympathetic as he does somewhat older women, to whom he likes to talk a lot when they come to the shop. He has masturbated ever since his youth.

One day his brother told him he had discovered that their father carried on a relationship with a woman who had a drapery shop in the village near the town. Their father visited her frequently and often stayed away for the day. The articles this woman bought remained unpaid for, but when patient's brother wanted to send her a bill, his father briefly said that that was not necessary. At last the brother, who had become suspicious, shadowed his father one day when the latter said he had to go on business to Amsterdam. Instead he called on the woman in question. The news filled the patient with great indignation. While his brother took the affair rather laconically, patient could not find words to paint his father black enough. He was beside himself with rage, called his father a scoundrel, an imposter, etc. He immediately wanted to tell his mother, who could then turn his father out of the house. In his opinion it was intolerable that she should go on living with such an imposter any longer.

His brother took the affair differently. He thought that the two sons had better take their father to task in a quiet conversation in order to reclaim him from his sinful ways. Thus their mother need not know anything. Patient consented to this, but could hardly refrain from telling his mother during the next few days. He was in a constant state of excitement and was impatiently looking forward to the conversation with his father.

The conversation turned out differently from what they had expected. Their father did not show any shame or repentence. He briefly told his sons that they could not understand such things, that a man sometimes needed another woman, but that the relation with this woman did not go so far as they thought it did, and that in any case he was not going to be lectured by his brats of sons. Patient's brother tried to reason with his father. Patient, however, who had been the more furious of the two, could hardly utter a word during the conversation. He cannot say why. (*He rejects the supposition that at the moment he was afraid of his father.*) Only after his father had gone did he unload himself to his brother. Then he called his father all sorts of names and grew even more angry with his brother when the latter dared to say in excuse of his father's conduct that the woman of the drapery shop was indeed very attractive.

Yet the patient again promised his brother not to tell his mother anything so as not to cause her any sorrow. After a few days his mother noticed, however, that patient was silent, that he looked ill and could not eat anything. Although he would not say anything, she at last came to know the truth by urging him to express what he had on his mind. ("To my mother I could not lie.") His mother's reaction, when he told her of his father's deceit, was not so fierce as he had expected. She was silent, cried a little, and thought it a shame. She immediately asked if the neighbours and the relatives knew, but she did not, as he expected, make a big row when his father came home that evening. If anything was discussed between his parents patient does not know. At any rate the affair caused an estrangement between them. The father did not give up his relationship with the woman; on the contrary, he was angry with his sons for having "meddled with his affairs" and denied coolly to his wife that anything of the kind had occurred. Nobody dared to stand up to him. Those were dull months at home. His mother was silent and sad, afraid of his father, who would fly out in a rage every so often. Consequently she sought comfort with our patient, who "discussed everything with her." Patient admits that he was really quite happy during this period, "having his mother all to himself."

One Saturday the two brothers visited some relatives in Amsterdam. When they came home in the afternoon, they surprised their father and mother in an embrace on the settee. Their mother was a little embarrassed and told the children, beaming with happiness, that their father had asked her forgiveness, that he had promised to break off the relationship with the other woman, and that things between them were all right again. Patient's brother was very pleased with the solution, but to the patient it was as if he had received a sharp blow. He was hurt by the fact that after the mean treatment his mother had suffered from his father she could so readily forgive him and allow herself to be so embraced.

He cannot describe what he felt that evening but he does remember that he felt disappointed and lonely. It seemed to him as if his mother had deceived him and he was very miserable. The fact that she had had "bodily" intercourse with his father again was repugnant to him. Yet he would not and could not show this. Everybody in the house was glad and he also had to pretend to be pleased. For some days he managed to sustain this attitude at the cost of much effort. *It was then that he began to have blood in the stools and diarrhea.* He did not speak about it to anybody and continued to do his work in the normal way. His mother, however, began to notice that he did not look well and that he had to go to the lavatory too often. He showed her his stools and it was she who went with him to the doctor. Patient's condition declined so that he had to be admitted to the hospital in his native town. His mother came to see him regularly. He was fond of talking with her, but the subject of her relation with his father was tabooed. He could not recover the former intimacy with his mother. His father also called on him occasionally. Later on patient realized that these visits had a bad influence on his condition.

Patient's condition improved a little and he went home again. Soon he discovered that his father had resumed the relationship with the other woman. Although he did not speak about it to his mother, it brought her nearer to him again. He gradually recovered. While he was not completely cured, there were periods when he could do his work again. Sometimes there were days when he did not speak to his father, sometimes there were rows which seriously affected patient. He was then admitted into the University department for internal medicine, where he recovered after several months of symptomatic treatment.

In 1940, shortly after the German occupation of the Netherlands, his father's shop was destroyed by English bombs. His father became an itinerant merchant again, but the patient had lost his field of activity now that the shop no longer existed. They quarrelled more frequently, his father reproaching him with his idleness and calling him a good-for-nothing who sponged on his father. During that time the symptoms were greatly aggravated and the patient placed himself under my treatment. On admission his condition proved to be so serious that an immediate blood transfusion was necessary. The conversations with him started soon after his admission.

After the psychologic situation became clear, an encouraging psychotherapy was applied. I assured the patient that with his sensitiveness and good taste he really was superior to his father, that he could actually have faith in himself, that his mother truly loved him, and that she had not left his father merely out of an old-fashioned sense of decency.

His mother came to see him often. The father was requested not to call on him for some time.

The results of this therapy were remarkable. The temperature became normal within two days after the main conversation which uncovered the conflict.

The appetite improved. Patient, who at first had taken laudanum regularly, could dispense with it and had no diarrhea in spite of a varied diet. Within four weeks his weight increased more than 10 pounds. Finally there was no longer any blood in the now solid stools.

After three weeks his mother told him that the next time his father was coming with her to see him. The next day he had diarrhea with blood and mucus again. This disappeared, however, immediately after the visit was over. As it did not seem wise to send the patient back to his parental home where there was no work for him, it was decided that he was to live with an older brother in Amsterdam. His mother could come and see him there occasionally. For about one and a half years there were no symptoms at all. Then his mother died suddenly of a coronary thrombosis. Her death was an enormous blow to him. Since then he has venerated her memory in an exaggerated way. With an almost womanly carefulness he has undertaken the education of the 14-year-old sister. He came to my office with this child because, in his opinion, she did not look well enough. He has broken altogether with his father, whom he reproaches with having brought about his mother's death. He had just become engaged to a girl when he broke off the engagement because "the girl proved not to answer his ideal."

He had a friendship of a platonic character with another girl that seemed to satisfy him completely. All this time, his colitis gave him no complaints at all and his diabetes disappeared completely.

A recurrence of his colitis took place in 1944 under the following circumstances:

To avoid persecution by the German police a hiding place was found for him in one of the poorer quarters of Amsterdam. He stayed with a childless couple. He did not like the man from the first moment that he saw him. He was a laborer. He was completely deaf and he led a solitary life. He never spoke to anyone. When he came home he would devour his food, read the paper, and go to bed. He was not very clean and he had very bad table manners. The patient felt drawn straightway toward his landlady, a woman of 52 years. He liked her because she was clean and quiet, and he felt that she sympathized with him. He took great pleasure in helping her with the care of the household and the cooking. She told him that she was not happy with her husband.

She was a diabetic, and the patient began to take an interest in her disease. He examined her urine. She told him about diabetic coma and from her description he became convinced that his mother had had diabetic coma. This produced a great fear in him that the landlady would fall ill. "I had lost my mother once; I didn't want the same thing to happen to me again." During this time he had an increase of glycosuria himself which temporarily required treatment by insulin. This improved when the diabetes of the landlady was controlled so that after a few weeks he was able to eat a full diet without insulin and without any glycosuria.

One evening when his landlady was out he decided to tell her husband that he should behave better toward her. He told him especially that he should use his knife and fork when eating. The man got angry at this. He shook the patient by the shoulder, called him a dirty Jew, and threatened to throw him out of the house. The patient felt very offended. He didn't say anything more and he did not tell the landlady when she came home. The next day he had severe diarrhea with blood and mucus in the stools and a high temperature. Various treatments were tried but the condition remained stationary.

I was asked to see him and after having put him at his ease he told me the story. No medical treatment was instituted. Instead, I told him that I appreciated that he had tried to improve conditions for the landlady who had been so kind to him. I advised him to tell her what had happened and I assured him that she would appreciate what he had done, even if he hadn't been able to make things any better for her. Thereupon I saw the landlady; I told her that the patient had had a row with her husband and I asked her for the sake of his improvement to tell the patient that she sided with him rather than with her husband. I asked her to give him as much encouragement as she could and I assured her that this would have a favorable influence on his condition.

Two days later his temperature was normal, the stools contained no more blood. A week later his diarrhea was also gone. Since then the patient has undergone several emotional difficulties. It was remarkable that one type of emotional trauma would give rise to a marked increase in severity of his diabetes and another type to a recurrence of the colitis. (The ultimate course of this patient will be dealt with in a forthcoming publication.)

Case II: This case, one of those seen together with van der Heide, is interesting because a colleague who would not believe in the psychogenesis of ulcerative colitis, showed it to us as an example of ulcerative colitis in a normal young man, who was married and had a child. It soon appeared, how-

ever that this colleague had allowed himself to be too readily deceived by the patient's first denial of any conflict.

This was a very severe case of ulcerative colitis in a 26-year-old office clerk, with fever, emaciation anemia, and diarrhea with blood and pus; proctoscopy revealed a rectum full of ulcers. On x-ray a typically "smooth" descending and transverse colon were seen, without haustration.

Biographical anamnesis: Patient, a 26-year-old clerk, had lost his father at an early age. He cannot remember him very well, but he does know that he was rather afraid of him. His father often used to swear, while his mother was always kind and gentle to him. He is the only son. After his father's death he lived alone with his mother, without seeing much of relatives or acquaintances. At school he had but few friends. He went to a higher-grade school and after that to an office, where he earned a small salary and gained little promotion. He was, however, content, as he liked the sphere of the office better than that of the factory where most boys of his kind worked. In the evening he studied for examinations at home while his mother was knitting or doing needlework. Those were happy evenings. He seldom went out with friends, as he did not like their coarse jokes, the drinking of beer, etc. Nor did he like the way they talked about girls.

With women and girls he was generally shy. On one hand he liked to make their acquaintance, but he was discouraged by the way in which they flirted with other boys. He often thought of a girl that would be an ideal friend to him and to whom he would be engaged. These daydreams were not accompanied by any thoughts of sexual intercourse. He thought much more of how they would walk together; he pictured to himself the way she would be dressed, etc. In reality he had no need of a woman, as he discussed everything with his mother, from whom he had no secrets. He hesitatingly denied masturbation.

All went well until the new neighbors arrived downstairs. They had a daughter whom patient occasionally met on the stairs. The way in which she looked at him confused him. One evening he and the girl came home at the same time. He opened the door to her and they continued talking on the landing. What he felt then he does not remember exactly; from which of them the impulse started he does not know either. In any case they embraced and intercourse followed.

Immediately afterwards patient regretted this acutely. He felt an abhorrence of a girl who could so rashly give herself to a stranger. He secretly called her a whore. He hardly said goodbye and ran upstairs. For the first time in his life he dared not tell his mother what he had done.

It kept him awake at night; the next few days he avoided the girl as much as possible. He tried to forget everything, but he could not get her off his mind. He had a profound contempt for her.

The girl, however, became pregnant. A few months later, when patient came home from the office one evening, he found his mother in tears. The girl's father had been upstairs and told his mother that her son had seduced his daughter. He demanded that the latter should marry the girl. Patient was seized with fright. He begged his mother's forgiveness and cried like a little boy. He told his mother how indecent the girl was and that he could not marry her. The mother, however, was shocked by the disgrace her son had brought upon her. She thought that there was no escape from marriage for him. Moreover, the neighbor was not so easy to deal with.

Later in the evening the girl's father again came upstairs to "talk." Patient himself dared not say anything. His mother promised that her son would make amends for everything and thus patient found himself engaged to be married.

This was the beginning of his misfortune. They had to marry quickly, as the pregnancy was already well-advanced. While they were engaged he could not even bring himself to kiss the girl, having an aversion to her. When they were married his wife sometimes sought bodily contact but he had become afraid of her, and some reluctant attempts at cohabitation failed altogether. He began to dislike his wife more and more. His mother had spent her savings to provide them with furniture and other things necessary for the household. Patient was upset to find that his wife was a bad housewife, negligent of the furniture and careless of her clothes. When the child was born, it did not give him any joy. He hardly looked at it.

When patient lost his job a short time afterwards, things grew worse. He was now at home all day long so that he no longer had the diversion of his work. His wife began to scold him because he did not earn any money and had made her unhappy. She kept on telling him that he was good for nothing. On such occasions she would often use vulgar and coarse words, which were disgusting to patient. He dared not answer back, but inwardly he knew that he was too refined for this woman. His mother also suffered under her son's misfortune, but he dared not speak to her about it. After one such row he ran away, but on the way he

realized that one ought not to leave one's wife and child in the lurch. After having wandered through the town for some hours he came home again.

Before his marriage he had already occasional diarrhea and abdominal cramps. A short time after he had married he sometimes saw blood in the stools. A few days after the row and the subsequent attempt at running away he fell seriously ill, exhibiting the typical symptoms of ulcerative colitis.

This patient had been in the hospital for many months and his condition had not improved in spite of the most divergent therapeutics. At the invitation of a colleague who had treated him, we were given an opportunity of talking with him. We encouraged him, told him not to lose confidence in himself, and advised a divorce, to which his wife readily consented. Patient seemed greatly relieved at the way we looked at the situation. He recovered gradually. After his discharge from the hospital we lost sight of him.

Case III: This case is especially tragic for the author because, at a time when he was already quite aware of the psychogenesis of colitis, he had an opportunity for psychotherapy and the patient died in the acute episode for which she was admitted.

This patient, a 48-year-old housewife, was admitted because she was thought to have carcinoma of the colon. She related that for about three months she had suffered from diarrhea, with blood and mucus in the stools. She was very emaciated, felt weak and tired. Occasionally she had an elevated temperature. She was anemic. No tumor was found. Proctoscopy revealed that the rectum was covered with a great number of smaller and larger ulcers to the sigmoid flexure. Even when the rectoscope had been passed into the rectum to 12 inches, bloody mucus was still coming down the tube, evidence that the process extended even higher up in the colon. From the x-ray it appeared that the descending colon was wide and atonic; its haustration had entirely disappeared.

The diagnosis was ulcerative colitis, although it seemed strange that the disease had begun at a comparatively advanced age.

Course: In this case I committed the error of not taking the psychologic anamnesis myself. The assistant on the ward reported that patient's marriage was a happy one, that she had two children, and that a conflict situation, such as I had suggested, was not present in her case. Thereupon I discussed the patient's circumstances with her a few times; but I made a second mistake by doing this during the ward round, in the presence of the ward sister and of the junior assistants. Patient denied any personal difficulties.

In the meantime her condition was declining in spite of intensive medical treatment with diet, drugs, opiates, vitamins, blood transfusions, etc. Up to that time it had been the custom of our department, in cases of serious colitis which did not react to internal measures, to request the surgeon to perform an appendicostomy or an anus preternaturalis. I did not yet want to proceed with this as I still hoped to obtain a history of some conflict from her. In the end, however, I could no longer resist the pressure of the assistants. The surgeon was consulted; he advised transfer of the patient to his ward, to take place the next day.

Before I left the ward that evening, I went to the patient to offer her some encouragement. She then asked me if I had time to listen to her. She had thought about my questions and now wanted to tell me something of her life. This was the only conversation I had with her. The anamnesis I obtained was therefore comparatively incomplete. Yet I reproduce it here, as it proved (although too late) that one should not be too quick in considering an anamnesis as "negative" when a patient at first denies a conflict.

Biographical anamnesis: This patient had had a happy youth. She was the only child. She did not tell me much about her parents. She had been very fond of both of them and still thought of them often. She married young. Her first husband was a street-car conductor and, as she put it, a very respectable man. They had two children, a boy and a girl. She attached herself especially to her son, who was very good to her, and a great comfort, after her husband died, at which time she was still fairly young. However, she felt very lonely after his death, having always had a great need of love and affection. Moreover, she could hardly manage financially, as she wanted to continue the children's education on the same level as before. She did domestic work during the day, did her own household in the early morning and evening. Nobody would have suspected that they were poor, everything being so well-kept. She was often very tired.

After a few years she married a man who lived in the neighborhood. He was entirely different from her first husband. Patient described him as being of a silent nature. He came from a small town in the province of Gelderland and patient thought that this might account for his bad manners. He was a "navvy" and earned good wages. Why she married him, she could not explain now. She hoped to receive from this man the affection

and love she so urgently needed. In this, however she was disappointed. Her husband remained as stiff and silent as before marriage. He never kissed her and "he only used her when he needed her." To patient this kind of cohabitation without tenderness was a torment. Once when she kissed him he pushed her back rudely and said gruffly that he did not expect kisses from a woman; such were the manners of a whore. This incident was very humiliating for the patient. For many nights it kept her awake. Since that time she has endured cohabitation with this man with the greatest repugnance. She was now ashamed of her longing for affection, but dared not ask anybody whether this longing was really as sinful as her husband thought.

The way in which patient told this clearly showed how much this worried her. She asked me in tears whether I, as a man, also considered this longing of hers for a little affection sinful. It was a great relief to her to hear that, on the contrary, I considered this quite normal, that a woman certainly need not always passively wait for her husband, but might also occasionally ask for a kiss without being "indecent." Patient then began to digress on the numerous other things she disliked in her second husband. Her former husband had always been neat and careful with his clothes, had always worn polished shoes and been civilized in his speech. Her present husband came home in his "navvy's" clothes with boots covered with mud, and fell upon his food immediately without washing or changing. He often went to bed without washing. He belched, in the presence of others, chewed tobacco (which was disgusting to patient) and used bad or abusive language when he was angry. Patient therefore merely endured living with this man, having as little contact with him as possible. She concealed her grief, but began to dislike him more and more.

Her only comfort was her son. The boy passed through primary and higher-grade school, and then graduated from a technical school, of which patient was very proud. He was employed afterwards by a man who was very satisfied with his work. He had little contact with his stepfather.

Then came an unexpected blow. The boy became engaged to a girl the mother did not like. Patient describes her as frivolous, keen on pleasures and on going out in the evening. The son, who had been very domestic up to that time and who used to discuss everything with his mother, changed rapidly. He began to smoke and to drink and often asked his mother for money to pay for his evenings out with the girl. Again patient did not say anything, but she was very much grieved. The girl soon became pregnant. This pregnancy before marriage hurt the patient's feelings. She felt ashamed of it. The young couple had no money, and the patient had to pay for furniture so that they could get married. Immediately after their marriage the war broke out. The boy had to serve in the Army; when he came home on leave, he hardly saw his mother. She had no contact with her daughter-in-law. With regret she saw that the latter was not a good housewife, who neglected the furniture on which the patient had spent her savings. She anticipated the birth of the child with fear. In addition, her son was dismissed by his employer. Life was of no value to her any longer: she lived with a husband who was repulsive to her; she no longer had the support of her son, who had given his affection to another woman. Outwardly she kept on running the household in her own careful dutiful way but she felt very unhappy. She did not speak to anybody about her troubles, although they worried her night and day. When I asked her why she did not talk about her difficulties with her daughter, she rejected this at once. "My daughter is such a child, she would not understand anything of all this." About this time her colitis broke out.

Ultimate course: It had grown late and I went home. I did not know what to do. Was I to advise against the transfer to the surgical ward on the ground of the anamnesis now obtained? Were my arguments strong enough to put off the operation which offered chances of recovery? Had I gained sufficient experience in the psychotherapy of this disease to promise the patient a better chance of recovery than by means of an operation? Moreover, there was the situation with regard to the surgeon with whom everything had been arranged. The transfer took place. Patient's strength proved inadequate. During the preparations for new x-ray examination of the colon she declined rapidly. She repeatedly got chills and died a few days later. At the postmortem it appeared that the whole colon was affected. The mucous membrane had disappeared almost entirely, only here and there was found still present a piece of intact mucosa.

Case IV: Patient B. was, when I first saw him on April 28, 1943, a 22-year-old, unmarried, laboratory technician. He had always been a delicate child. His parents are both healthy, but nervous; patient is their only child. When he was 8 his tonsils were taken out. After that his health improved. In February, 1938 (at the age of 17), he saw for the first time blood in the stools. The next day he

had diarrhea with much pus, which was repeated 16 times that night. He had fever and gave the impression of being seriously ill. He was admitted to a hospital, where on proctoscopy a typical ulcerative colitis was found. After six months he was discharged, his condition having improved a great deal. When, in May 1939, he suffered a relapse, he was treated in the same hospital from May 14 till June 28, 1939. In 1940 he was admitted again. After that he was well for a long time, until during the night of April 20, 1943, he again saw blood in the stools. The next few days he had diarrhea with mucus and pus and cramps so that he had to stop working.

On being examined patient appeared to be a well-built young man, normally developed for his age, and presenting a moderately sick appearance. The temperature was 38.3° C. The pulse 92. There was a slight anemia.

I did not find any changes in the organs of the head, the neck or the thorax. The abdomen was universally sensitive to palpation. Cecum and sigmoid felt a little contracted and were felt bubbling upon palpation. The examination gave rise to painful cramps, followed by evacuation. The stools were thin and bloody, and contained pus. Microscopically many erythrocytes and leucocytes were seen. The stools further contained too many undigested carbohydrates, soaps, and fatty acid crystals. The urine was normal, the sedimentation rate was 27 mm. after one hour. The number of leucocytes was 10,250 per 3 mm. The differential count was normal.

During the first few days of the observation the patient's condition aggravated. It was not possible to stop the diarrhea in spite of large doses of opiates. An attempted treatment with sulfathiazol had to be broken off after four days because of vomiting and general reaction. In the meantime it had been possible to obtain a detailed anamnesis.

Biographical anamnesis: Psychologically the patient makes a peculiar impression. He wears a nice neckerchief on his pyjamas and his sheets are always arranged just a bit too neatly for a man. He speaks carefully, in a slightly affected way, and sometimes he smiles a little coquettishly. He says almost at once that he has a great interest in philosophy. He speaks about all kinds of problems, for which, on a closer examination, a solid foundation appears to be lacking. At first it was difficult to induce patient to give a simple report of the circumstances preceding his disease. He said that he has an extraordinarily calm and somewhat stoic nature. He claimed he hardly ever lost his self-control as he hated doing so. During the conversations I had to take care constantly that he did not diverge into pseudo-intellectual "explanations" instead of merely stating facts. It was difficult also to get him to repeat a "nasty" word (*i. e.*, rotter) if one had been used by others, and which he had to mention in the course of his story. He hated to use an uncivilized expression.

Patient is the only child and has been surrounded with tenderness by his mother from his earliest days. He really never liked his father, whom he describes as a coarse man, who suffered from outbursts of passion. As a child, patient already suffered from the way in which his mother was sometimes abused by his father. His father worked hard and had to cope with many difficulties in his work. When patient's father came home, he would vent his resentment against his difficulties on his wife. However, the father also had good qualities: he was smart, a good mixer, always made a good impression on strangers. But even these qualities irritated patient. "My father is a hot-tempered man, he always acts on impulses. He does not have any sensitiveness and thoughtfulness. He is a primitive man without any refinement. He may sometimes be very nice to other people, but after I had heard him swear and rage against my mother and use all kinds of filthy words, I could have murdered him."

Patient describes his mother as a nice, gentle woman to whom he had always been very close. For the sake of peace in the house she endured her husband's fits of passion. As a child, patient was over-particular in the choice of his food and his mother always worried about him. After a tonsillectomy his health improved a little, but he remained a dreamer. His mother was a theosophist and often sent the child to the theosophical library for books. He liked this very much. He met some people there for whom he developed a great admiration. One of them he still calls his "spiritual father." At the age of 12 he left the elementary school, where he had been a good student. At the advice of the teacher it was decided to send him, after higher-grade school, to an electrotechnical school, as it was thought wise for him to get a little more contact with practical life.

At first he had a very difficult time at the technical school. "I had two left hands, I had never worked, only read. The other boys did not understand me when I spoke about Beethoven. The teachers told me that I had better confine my attention to foregoing theosophy. After the first two difficult years things improved. I gradually acquired a place of my own in the class. Theoretical

mechanics and physics even became my favorite subjects! But I have always retained a great interest in philosophy. I have become a supporter of the intuitive element in philosophy. Examinations were always accompanied by great tensions for me. Yet I always passed them successfully."

The excessive care with which he was surrounded is expressed in the interest his family took in his progress at the school. At the age of 15 he was allowed to make a trip to Norway. The next summer, when he had passed another examination, he was rewarded by his mother with a trip to England, and by his grandmother with a journey to Switzerland.

In the meantime the quarrels between his parents continued. In the spring of 1938, when patient was nearly 17, he discovered that his father deceived his mother with a girl that lived in rooms in their house. Out of pity his mother had taken this girl, an orphan, into the home a few years before. Patient had never liked the girl, as he really disliked everybody who came to stay in the house and thereby intruded upon the fine harmony between himself and his mother.

Patient discovered his father's relationship with this girl even before his mother did; probably his mother did not want to become aware of it. He began to have rows with his father. Patient remembers on occasion, when he was upstairs in his room, he heard his father making a scene and calling his mother all sorts of names. He went downstairs, very much excited, and cried out at his father that he should go away and no longer make a mess of their lives. Upon this his father went at him with a chair. At first patient allowed himself to be beaten, but he soon hit back furiously. The next moment he felt very queer. He suddenly became stiff, could not say anything, grew weak, and turned deadly pale. He had to lie down on the couch. His father was terribly frightened and wanted to make amends, but patient who could not bear the idea that he should touch him only said "Go away, go away!" His father went out and patient stayed behind with his mother, who soothed him. The next few days she made attempts at reconciliation, but patient grew more and more inwardly restless. He could not tell his mother what he believed was going on between his father and the girl. He dared not speak about "such a terrible thing" to anybody, and certainly not to his mother whom he considered to be a woman of too high moral standing. He felt extremely unhappy. He had the idea that the whole world was wicked and depraved and that he did not belong there. What exasperated him most of all was that his father, whom he knew to be such a scoundrel, quietly went on living, eating with good appetite and ruling the house, as if he had the right on his side. One day patient could stand it no longer. He said to his mother: "Mother, let us go away together and leave father, you are much too good for that man." His mother was surprised. She maintained that his father had many good qualities, that he, as a son, ought to have respect for his father and that he should try to become reconciled with his father. Moreover, what could they live on, if they went away?

Patient was very much disappointed by his mother's attitude. He felt humiliated. In the evening, when his mother suggested that he and his father take a walk, in order to become reconciled, the two got into a violent row. His father again hit him. The walk did not take place and patient felt even more miserable. *A few days later his colitis broke out.* After a week or so he was admitted.

At first things in the hospital did not go well with him. He lay in a big ward and felt embarrassed before the other patients because he had to go to stool so frequently. The mental level of the other patients, and especially of the nurses, was very disappointing because they were so materially-minded, flirted with the physicians and held superficial conversations with each other. He missed the intimate sphere with his mother at home. In the afternoons his mother came to see him. He liked that for she came alone. He tolerated his father's visits in the evening, because he appeared to be seriously troubled about his son's health.

During his stay in the hospital he openly warned his mother against the girl. His mother admitted that she had become suspicious. From then on she kept him informed of what she observed. One evening after his mother had gone to bed she heard her husband enter the house; as he was a long time in coming to the bedroom, she got up to see what he was doing. In the passage she surprised her husband as he was coming out of the girl's room. She made a scene, and turned the girl out into the street. However, she forgave her husband, because she valued his good qualities over what had happened. But it brought about a permanent estrangement between the parents. Her son was informed of all this while he was in the hospital. His condition improved gradually and he was discharged, apparently cured.

Patient remained well till May 1939, the time of the testpapers for promotion to the next form at

the electrotechnical school. Apparently patient became very nervous and anxious about this examination. He cannot remember whether there were other conflicts. The disease recurred, but for a shorter duration; after a month in the ward he was discharged.

Up to that time patient had had little contact with girls. He frequently practised onanism. He was profoundly ashamed of this and fought it. He took cold showers, became a member of an athletic club, but all this was of little avail. He spoke about it with his mother and with the family doctor, but neither could help him. A potion had some effect for only two days. Since that time patient has been worrying about the influence this habit may have on his constitution.

In the summer of 1940 patient began to work for another examination, which was a great strain on him as usual. Moreover, he fell in love in that time. In his case this meant that he often walked with a girl and carried on conversations with her "on a high level" about the meaning of life, about the attachment of people to each other, about ethics, etc. He knew that his mother did not like this girl, but he had told her frankly that he knew quite well what he was about; after all, he was old and wise enough to judge the right sort of girl. After a few months things between them had advanced so far that they kissed each other for the first time! The effect of this was different from what he had expected. During this kiss he realized that this girl wanted not only spiritual relations, but that she was also very bodily-minded. This was not pleasant to him; it hurt his ideal of her, but he did not speak about it. This happened while he was staying in the country, where the girl had come to see him. The next day she went back to town and called on his mother immediately. She hinted at what had happened and intimated that an engagement was soon to follow. She then inquired in a rather intrusive way about patient's position after he finished the technical school and whether he would soon earn enough to be married, etc. All this was very distasteful to his mother. She concluded that all this girl wanted was to become engaged to be married, thus to ensure a good future through her son. When patient came home a few days later, his mother told him about the girl's visit. It annoyed him that she had done so behind his back and when he next saw her he asked her what she had meant. She replied that if he should not be able to provide for her or if he did not earnestly intend to marry her, she could get another husband. This came as a great shock to the patient. He felt he had been deceived. This girl, whom he had approached with so much awe and respect, to whom he had laid bare his innermost thoughts, turned out to be but an "ordinary" woman after all. He suddenly saw how sensual and how vulgar she really was; he suddenly felt an abhorrence of her. Now he realized that his mother's judgment of the girl had been correct. At the same time he felt it as an insult that she was prepared to become engaged to "the next man she saw," while she failed to appreciate a man like himself. He told her curtly that an engagement was out of the question. Thus they parted.

Patient did not want to tell his mother about the humiliation he had suffered from the girl. The next Sunday, during an air fight over Amsterdam (Holland had just been caught in World War II), he suddenly felt afraid and ill. The same afternoon he had six stools with blood, mucus and pus. A few days later he was admitted to the hospital for the third time.

He was again treated with enemas, drugs, and a rigid diet. He again abhorred the atmosphere of the ward, and often cried. After some time his mother told him that the girl had actually become engaged to another man, but this engagement also was soon broken off. Gradually the incident lost its importance to him, while he was recovering from his disease. Later on, however, he often still got a tic in the abdomen when he saw this girl. (*It was curious that when patient told me about this period of his life, he suddenly got cramps and had to ask for the bedpan.*)

Although he had not been at school for some time, he was promoted. He remained well for a time. In 1941 he successfully passed his final examination. He had then to do practical work in a factory. He did not like the rough and dirty environment of the steel mill where he was employed. But he held out, chiefly because his foreman was well-disposed towards him. Afterwards he was very proud of having served that difficult apprenticeship at the factory. When he left the factory in December 1941, he could not get a job because he was a Jew. In the meantime he had coached several pupils of the higher-grade school for their examinations and had given lessons on varied subjects. Patient proved to be endowed with a special ability to explain things to others. He devoted himself entirely to his "pupils." Consequently he wanted to become a teacher, as he did not feel very much attracted towards the practice of electrotechnics. He now regretted that he had not entered the University. He began to feel in-

ferior to boys and girls he knew who were at college. However, he felt that intellectually he certainly was their equal and in many respects their superior. Girl students were especially superficial in his eyes; he himself wanted to attain to a more profound knowledge of things.

As he could not go any further in electrotechnics, he decided to attend a course for medical laboratory technician. On the one hand this gave him much pleasure, but there were also some things that were less agreeable. As the course proceeded, he was more and more annoyed at the frivolity of his fellow-students. It seemed as if they only lived for fun and sweets, whereas he himself took his lessons so seriously. In addition it annoyed him that one of the teachers, whom he admired for his professional knowledge, misbehaved as a man. He observed how a certain intimacy developed between this teacher and one of the girls, from which he was excluded. He detested this because he had expected this girl to be different. Everything about this teacher began to irritate him, his portliness, his smartness and quickness at repartee, his success with girls. Patient saw how superficial and how little value all this was. As the final examination approached, he grew more nervous. Moreover, his parents had to move into another house in order that his grandparents could come and live with them. He now had much less opportunity to be alone with his mother. Conflicts with his father and with his grandparents occurred frequently. Usually they resulted in word-slinging in which he was not adept, and he always felt offended. In spite of these difficulties the patient passed the examination very successfully, having the highest marks together with the girl that the teacher so particularly liked. The candidates who had passed met one evening to celebrate. This was hardly pleasurable to patient, who was terribly annoyed at the frivolous conversations between the teacher and this special girl. The fact that these two were eating cakes and sweets, while so many people during this war were starving, exasperated him. At the end of the party he walked home together with the teacher and the girl. They spoke about morals and this resulted in a debate between the teacher and patient. Patient maintained that morals were the criteria for the intrinsic value of a man and that any success that was obtained in a superficial way was valueless. The teacher, however, contended that for morals there were no absolute standards. Morals had been different in different times and with different people, nay even among the different classes of the population. In abnormal times like the present, morals were different again and the best one could do now was to try and make life as pleasant as possible. This discussion, in which patient clearly felt that the girl sided with the teacher, had a shattering effect on him. He had always considered himself the better of the two, but now it seemed as if that "pleasure-seeking man was philosophically right after all." He could not say anything in reply to this man's argument. Against his cool logic he, with his fine intuition, was powerless. "It was as if I was holding the fragments of my conception of life, nay, of my entire value as man, in my hands." Outwardly he remained friendly. They said goodbye but when the patient arrived home he felt absolutely crushed. The next few days he wrote the teacher a number of letters in which he maintained his point of view, but he did not dispatch them because he felt that he had been beaten. In addition to that he had to admit to himself that he himself had developed inclinations towards this girl. These he had fought against as being sinful and he had been very much ashamed of them. Would it have been wrong to fight against them and to control his feelings? Where was the ideal after which he had so far patterned his life?

Simultaneously other similar difficulties arose. After the examination he started as a voluntary worker in the laboratory of the hospital where he had been a patient. The surroundings were repugnant to him; everything there was coarse and vulgar. It reminded him of his disease. Moreover, the girl with whom he had formerly been in love worked there in the roentgen department so that he saw her daily. A number of boys and girls who were working in the same laboratory flirted with each other as the students had. They had a superficial, easy way of going about with each other, the women trying to please the men physically. He felt superior to this but could not impress this upon them. One day he ventured to discuss philosophical and other subjects, but in this debate he was beaten again by one of the other male technicians. When, in addition to that, he spoiled a titration, everybody laughed at him.

Three days after the discussion with the teacher and one day after the dispute at the laboratory, which had a humiliating effect on him, he again saw blood in his stools. He spoke about it with one of the physicians at the hospital, but the latter plainly told him that he did not intend to admit him again. He should not complain immediately about any slight disorder. That night he had violent cramps and diarrhea, not only with blood but also with pus, so that he did not go to work the

next day. His mother went with the stools to the same physician. The latter said that her son was a spoiled child and that he did not intend to pay much attention to his complaints. His mother came home and repeated what the doctor had said. Patient pretended not to mind, but that day he had diarrhea 12 times. This was the beginning of his fourth attack of ulcerative colitis.

It was not easy in this case to obtain a complete catharsis. At the end of every conversation patient would assure me that he had told all that had happened to him, while later on other important difficulties still came to light. It was curious that at this time the favorable effect of each conversation was lost within a few days. Only after a long conversation had been carried on in the presence of his mother did it seem as if a complete "unloading of his mind" had been obtained.

In the beginning of the treatment, I arranged that his father was not to see him any more. I requested his mother to take her son's side in any situation when, in the course of a conversation, the personality of patient's father should be mentioned. My last conversation took place in the presence of his mother. During this conversation patient was listening most eagerly to his mother, while she agreed with him in all his grievances against his father. Then he was no longer shy at all and called his father names he had not dared to use a few days before. He also spoke much more freely about other things.

From that day on the patient's condition improved rapidly. On April 9 he saw blood in the stools for the first time. On April 22 he stayed at home, having fever and diarrhea with blood and pus. On April 28 I had the first conversation with him, which produced little result. On April 30 he began to speak more freely. On May 8 the last conversation took place at which time I got the impression of having obtained a complete catharsis. On May 10 the stools were solid and contained only a little blood on the outside. On May 12 his stools were quite normal. Further reconvalescence took only a fortnight and was uneventful.

Shortly after this the patient and his family had to hide to escape deportation to Poland. It was arranged that his father would disappear separately. The patient and his mother stayed together. His father was caught very soon. It did not affect the patient at all as he was himself in difficulty. They had hired a hiding place at great cost in the cellar of a house in Rotterdam. It was damp, dark, and hardly furnished. They received bad food. Sometimes the owner would forget to bring them their food for a whole day. After a while the owner insisted that one of the two had to leave because he feared that people might hear them talk. The patient's mother was transferred to another hideout where she was soon betrayed and sent to a concentration camp. After the patient had stayed alone he became restless and excited. He suffered terribly from the ugliness of the place, the darkness which made reading impossible, and the dirt. One day, when water inundated the cellar, he broke loose and told the proprietor that he wanted better treatment if he was to go on paying so much money. But he suffered a terrible blow when the man told him that he would not accept such a remark from a Jew and that the patient had to be grateful that he was taken care of at all. The patient felt humiliated and powerless. The next day he had a recurrence of his colitis. It induced an underground worker who came to see him to try and find a better hideout for him. A fortnight later he was taken there.

The patient liked his new surroundings much better. He had a small room of his own. A girl of his own age, a member of the underground resistance, provided him with ration cards, with some books. As a result of this changed situation his colitis improved immediately. However, a few months later he had another recurrence for which I was asked to see him.

He looked very pale and emaciated. He had been running a temperature for ten days, the stools were frequent and loose, and contained much blood and pus. On questioning, the following situation came to the surface:

In this new home he was allowed to come down to the drawing room in the evenings when there were no visitors. He had felt drawn to the landlady, but not to her husband as "he missed fine intuition." One evening the three talked about the future. The husband said that after Holland was liberated every man would have to volunteer to fight the Japs in the Dutch East Indies. The patient felt that he had already lost so many years through this war that he would like to enjoy life first. His landlord became furious, he reproached the patient for lack of patriotism and lack of gratitude. He called him a coward and told him that Jews were always like that. The landlady agreed with her husband. The patient withdrew to his room, but could not sleep. He got up and wrote a long letter, explaining his viewpoint. The next evening when he entered the room neither one spoke to him. They behaved as if he were not there. They did not answer his good-evening when he came in nor

his good-night when he left after he had understood what they meant.

Back in his room he felt offended and hurt. He tried to tell himself not to mind. Next day he told his girl friend what had happened. She was very worried and told him that he had been stupid to risk losing the sympathy of the people who had taken him into their house. She was alarmed at the idea that they might want him to leave, for it had become increasingly difficult to find new hiding places. She certainly did not comfort him. *The next day he fell ill with colitis.*

Psychotherapy was not easy this time. I told the patient to stay in bed and not to go down into the drawing room. I took the girl into my confidence and told her that even if it was not true it would be better for him if he was told by her that she took his side in the issue. I spoke to the landlady and explained to her that two years of confinement had changed his mental attitude and that I was absolutely certain that after the liberation he would do his duty, like anybody else, after he had once returned into the community. A mutual understanding was reached, harmony returned, whereupon fever and diarrhea disappeared.

Case V: Mrs. H. H. N., a Jewish, married woman, was seen first in July, 1943. She was then 25 years old.

In February, 1939, she began to complain about abdominal cramps and diarrhea. In November, 1939, she noticed for the first time blood and mucus in her stools. The next year she had occasional attacks of fever. In 1941 she was admitted to a hospital where, after thorough examination, including sigmoidoscopy and roentgenograms of the colon, a diagnosis of ulcerative colitis was made. Her condition, alarming at first, gradually improved. She was discharged in March 1943, but she still had tenesmi and two loose bowel movements a day with occasional loss of blood.

She appeared in moderate health and slightly anemic. There was a soft systolic murmur at the base of the heart. Otherwise physical examination was negative. The stools were semisolid and contained blood, leucocytes, and badly digested carbohydrates. The hemoglobin was 67 per cent, erythrocytes 3,670,000. There was a slight shift to the left. The sedimentation rate was 35 mm. after one hour. X-ray studies revealed the typical picture of ulcerative colitis.

Biographical anamnesis: The patient was born in Amsterdam in 1918. Her father was a rabbi. Her mother came from Germany. The family life was based on the orthodox Jewish faith. The patient was the older of two children. Her brother was one year and nine months younger. Both were surrounded with care during their childhood. The patient had the impression that her mother liked the boy best, while she was her father's favorite. Patient liked her father better than her mother. According to her, her mother dominated the family. She tried to keep the children subdued. They were not allowed enough freedom. They had to ask permission in order to do anything. At an early age the patient noticed that her mother seemed to love her German family more than her own children. She remembers that her mother had once given her dolls to a German niece without telling her. Her father was a scholar, a kind and silent man, who left the care of the household and the education of the children largely to his domineering wife. A silent mutual sympathy has always existed between the patient and her father. As a young girl the patient would sit next to her father, reading a book. She liked this better than playing with her friends. Most of the time the mother would interfere and make her do some household task. If anything did not happen as her mother wanted she would be angry. When she was annoyed she occasionally made a scene. Her father, who disliked harsh words just as the patient, would usually give in, as did the patient.

The patient has had a longing for harmony so long as she can remember. Between her and her father there existed a sympathy about which they never spoke; her mother was outside of this mutual feeling. The patient felt that her mother's nature was too hard for this subtle harmony. "My mother prepared the meals very well, but spiritually she never gave us anything. I do not believe that she even understood that we had a longing for something more than food."

The patient did well at school, after completion of which she went to work in an office. She did her work well and her employer was always satisfied with her. In the evenings she either worked for additional diplomas or she would stay at home to make or repair her clothes. She had very good taste in dress.

At school her girl friends had told her how children came into the world. She did not like the news and she tried to forget it. The first menstruation appeared when she was 14 years old. It did not especially frighten her. She denies masturbation. On the whole she was a quiet child, with an uneventful history and had very little contact with boys. She met her husband at a dance when he was 16 and she 15 years old. From then on he remained

her boy friend. Their relation was platonic for a long time. Later on the boy would kiss her occasionally. This satisfied her entirely, but she began to notice that the boy wanted more. His desires gave her an unpleasant feeling about which she tried not to think.

Later on the young man asked her parents' permission for an engagement as he wanted to get married. Her parents objected. They considered their daughter too young for marriage. Moreover, the young man in their opinion, did not earn enough money to keep his wife, nor did they approve of his plan to emigrate to Palestine, as they wanted to keep the children with them.

Her parents' refusal created the first serious difficulty in the patient's life. "I was placed in a difficult position between my love for him and for my parents. This made me very unhappy." The situation became tense when the young man threatened to go to Palestine by himself, whereas her mother insisted that she should break off her friendship because she did not consider it proper that a girl should carry on a friendship with a boy to whom she was not engaged. In the end the young man had a conversation with her father who gave his permission for the engagement in March 1939.

However, this did not make the patient very happy. Her mother continued to dominate the situation. She decided what the young couple should and should not do. She presented her daughter with the linen for the household, having bought it by herself, without even asking the patient if she had any wishes in this respect.

Her friend was not satisfied either. Once engaged, he wanted to get married, but her parents were against it. Her fiancé told her plainly that he could no longer repress his sexual desires. This struck the patient as very unpleasant. She herself had no desires in this direction at all. She had to allow him certain caresses but she had a terrible fear of sexual intercourse. She felt that she would never dare look her parents in their eyes. Her fear of the sexual approach disturbed the harmony which she had formerly felt in the presence of her friend, although outwardly she did not show her feelings. In the course of the years 1939 and 1940, when all this took place, she often had abdominal pain with diarrhea and occasional blood and pus in the stools.

One day in 1941 she quarreled with her friend. The young man told her bluntly that he had had enough of this situation. He told her she had better choose now between him and her parents. If she did not comply with his wishes he intended to go away for a while. He had met another girl whom he did not love so much but who appeared to have more understanding of his male desires. After a month he would come back. He hoped she would have made up her mind then. The patient felt shocked and humiliated. He had never spoken to her in such a way before. She told him that he was free to do what he liked. She would never hang on to a man who she felt did not love her any more. When she came home, however, she broke down. She told her father that they had quarreled, but she dared not tell him exactly why.

About thirty-six hours after this incident she suddenly fell ill. That night she woke up with much pain and severe diarrhea. Next day she had a high temperature. She could not eat and she was losing so much blood with the stools that she had to be taken to the hospital at once. She received several blood transfusions and for the first weeks was critically ill.

For the first days after her admission to the hospital, her friend did not appear. When he came, after about a week, he apologized for his behavior, but the way in which he spoke was so indifferent that she could not decide if he meant it. (Her father told her later that he had spoken to the young man and that he had induced him to visit her in the hospital.) During these first weeks she felt very unhappy. She could not forget that her boy friend had planned to go to another girl whom she did not know but whom she considered as morally inferior. However, she did not speak to anybody about her worries. Her father had the privilege of entering the hospital at any time. Usually he would come in the afternoon. His visits did her a lot of good although she never told him the real cause of her trouble. During the official visiting hours either her mother or her fiancé would come. With neither of them did she feel comfortable.

In 1942, when she was still in the hospital, the German police began to round up the Jews in the Netherlands. The action started with the unmarried men. To safeguard the young man from deportation it was suggested that the two should marry. The marriage was concluded by a town clerk who had come to the hospital for that occasion. The two agreed that the religious ceremony (the only one that mattered for them) would take place later.

The formality of the marriage gave her a certain satisfaction. From the fact that her fiancé had asked her to do this for him she concluded that he still felt attached to her. However, she still had a certain uneasiness when she thought about what would

happen after she left the hospital. About this time her general condition improved, but she still had diarrhea with occasional blood and mucus.

In March, 1943, the German police surrounded the Jewish hospital in Amsterdam. Patients and nursing staff were transferred to transit camps from where they were later deported to Poland. The patient was fortunate enough to escape, but a few weeks later she was caught together with her family. From the transit camp her parents were soon deported to Poland, from where they never returned. Her young man succeeded in obtaining an exemption for himself and his wife. Back in Amsterdam they sought medical advice for her colitis. The young man wanted to know if there were medical objections against marriage and pregnancy.

During the conversations the fixation on the father and the patient's negative attitude towards the mother became clear. Moreover, it appeared that the patient still lived in fearful anticipation of what would happen after she was truly married. She was especially afraid of the act of sexual intercourse.

A very simple psychotherapeutic approach was followed in this case. During the conversations her self-confidence was strengthened by paying her an occasional compliment on her good taste and household abilities. She was assured that her husband was indeed very attached to her. Furthermore, she was told that she was neither bodily nor spiritually inferior to other women and that there was every reason to expect that she would be able to make her husband happy. It was explained to the young man that the patient had matured somewhat slower than most women. He promised that he would only gradually initiate her into marital relations. The patient was told that she need not be afraid of this sexual approach about which she had worried so much and that if she did not feel prepared her husband would certainly be willing to wait.

Within a few days after these conversations her condition improved. The stools became formed, blood and mucus disappeared. The appetite improved. After the religious ceremony, satisfactory sexual relations were established. Three months after the marriage she became pregnant. In the meantime the couple had to hide to escape the German persecution. The child was born secretly. The patient nursed it herself. She was seen again after the liberation of the Netherlands. She was perfectly happy and her colitis was cured.

Case VI: Mrs. G. B. M., a 51-year-old married woman, was admitted in March, 1946 with a chief complaint of bloody diarrhea and jaundice.

Medical history: The patient had always been a weak child. She had many illnesses, among them scrofulosis. Her present illness started suddenly, in 1938, after a severe attack of bloody diarrhea with mucus and pus in the stools, abdominal cramps, and fever. She was hospitalized soon after the onset and made a slow recovery. However, three months after admission she signed out against advice. On her return home, her condition became worse, but she managed to get along until she had another severe exacerbation in 1941. She was hospitalized for the second time, seemed to improve, but on going home she had another relapse. Leaving in 1943, this time she had almost normal stools, but one day later she was "as sick as ever." Since then she has had an up-and-down course, until her admission to the Second Medical Service of the Wilhelmina-Gasthuis for what appeared to be infectious hepatitis.

Patient appeared moderately well-nourished, moderately ill, with hypochromic anemia (60 per cent hemoglobin, 4.2 million erythrocyte count) and marked jaundice. The liver was enlarged one finger below the costal margin. The spleen was just palpable. There was generalized tenderness over the abdomen. The patient had 4 to 8 bowel movements a day, with gross admixture of blood, mucus, and occasionally some pus. The urine contained bilirubin. Vandenbergh reaction was positive, 6 mg. per cent direct. Sedimentation rate was 80 mm. in the first hour.

The diagnosis of ulcerative colitis, established on basis of leucocytosis, typical ulcers on sigmoidoscopy, and x-ray picture was confirmed at the present admission.

With a low-fat diet, paregoric, and supportive psychotherapy her jaundice cleared and the diarrhea diminished. She left the hospital greatly improved, in good nutritional status. Her bowels moved only once or twice a day, stools were almost normal. She remained well until the present writing.

Biographical anamnesis: The patient was born in Hilversum in 1894. The parents were poor. Her father, who she greatly respected, was a street cleaner who tried to make a little extra money for his large family by doing odd jobs at night. He was a quiet man, of very strict Calvinistic customs. Her mother was a hard-working woman, who tried to keep the house scrupulously clean and was too busy with cooking and sewing to give much attention to any of the children individually. On the whole, the patient got more attention from her

parents than any of the other children because of her frequent illnesses in childhood. She even remembers that her father once bought her an ice cream cone.

The marriage between the parents seemed to be a happy one. The patient never witnessed any quarrels between them. The family gatherings were celebrated by all. No one in the family went out a lot, and the girls especially were kept under strict discipline. They were not allowed to go to a dance or a movie. The patient went twice a week to a Bible class. The father used to tell the girls that they had to take great care that they were not seen in the company of boys, as this would be very bad for their reputation. The patient received these warnings at a time when she was sexually entirely naive. It gave her a fear of boys at an early age.

She left school when she was 11 years old to help her mother with the housekeeping. Later, she worked in a laundry. She stated she has "inherited" her mother's scrupulous cleanliness and sense of duty in keeping the house in perfect order. She has always liked working provided the people for whom she worked were kind to her. She has always kept a strong desire for a quiet, secure, homelike environment as she had in her parental home.

The patient remained naive in everything connected with sex for a long time. The parents took care that the boys and girls (there were 16 children in all, 6 of whom died at an early age) never saw one another undressed. The patient has seen her father kiss her mother on her birthday, but apart from this she has never witnessed anything related to sex behavior. She had her first period when she was 16 years old. It gave her a great fright until her mother told her that this was normal for a girl. When she was 18 years old her mother had her fifteenth child. At none of the previous times had the patient ever noticed anything special about her mother when she was pregnant! A girl who worked in the same laundry had an illegitimate child about the same time; and the patient received her first knowledge of procreation. These facts increased her fear of boys.

When she was 23 years old she met a boy from The Hague who was passing through Hilversum on his vacation. They became friendly but her father would not allow her to go out with him. The boy suggested that she find a job in The Hague so that they could see more of each other. This she did, although it was difficult for her to break away from home. She was disappointed when she found out that the boy "wanted to do things with me as with a grown-up woman. This I did not want to do. My father had produced a great fear in me for these things and I would never have dared see my mother again if I had done it." The patient broke the engagement. If the boy really cared for her he would certainly not give her up when she didn't yield in this respect, but he did. This left her very disturbed. However, she never dared to speak with anybody about this.

About a year and a half later she met her present husband. He was a good-looking man and they saw a lot of each other. He had "a bad disposition." At times he would be quite charming but at other times he was ill-tempered and egotistical and if she didn't do what he wanted her to, he quarreled and cursed. The patient felt attracted to him and at the same time she was afraid of him. At times he would make up for what he had said when he lost his temper but the patient was over-sensitive and she felt offended for a long time after each outburst. She has never been really happy with him. He forced her to have intercourse with him but she never liked it. After a year she tried to break the engagement and she felt relieved at first, but when he came back she could not resist and when she was 29 years old they were married, "partly through fear and partly through sympathy for him I gave way."

After the marriage, conditions became worse. There were often scenes between them and on a few occasions he even beat her. She felt deeply humiliated and unhappy. However, she continued to take care of her husband and kept the house meticulously clean as she had always been taught to do. She always hoped he would appreciate this but he never did. He spent most of their money on himself, giving her little for the household. After a while, she noticed that he was going out with other women. Intercourse was a torture; she tried to avoid it as much as possible. She was afraid of pregnancy and thought the baby would be like her husband, she had weeping spells, did not dare to go out into the streets, had a fear of scissors and knives, and was afraid she might become insane. Then she decided it might help her if she went to work for other people and it did. Everybody she worked for was "kind to her." People said she did her work scrupulously well. She felt that in this way she at least got some sympathy and love, without which she could not exist. Later, the patient suggested to her husband that they move to Amsterdam hoping to be nearer her parents and that seeing them from time to time would help. However, she never told anybody how unhappy she really was.

After a few days with the husband's sister while

looking for a house, the patient began to dislike these people. They were not the sort of people to whom she was accustomed; they were loud, used coarse language, told indecent jokes, and the house was not as clean as she felt it should be. Her husband had one of his temper tantrums while there and "told her off" while they were sitting at table with his sister and her husband. Her sister-in-law sided with the patient and for the first time the patient broke loose and dared to defend herself. This made her husband more angry and he countered by saying, "You are no good as a woman. You don't let me have my way as a man. You refuse to have children. You force me to go out with other women who understand a man better than you do." The patient felt very much ashamed that this intimate discussion happened in the presence of others. Her sister-in-law tried to console her but the patient felt hurt. The next day she had a severe attack of diarrhea. *This is how her illness started.*

She and her husband stayed in Amsterdam but very soon the patient's condition was so poor that she had to be hospitalized, where her condition improved. A few weeks later, however, one of the other patients told her that her husband received in her house a girl who had been in the same ward and with whom he had managed to become acquainted during the visiting hours. This gave the patient a terrible shock. She felt that he was deceiving her even while she was ill. She was ashamed that the other women in the ward knew about it, and signed out against medical advice. When she told her husband about it he said, "You will never get better, so I had to look for a woman who is not ill." Her condition immediately became worse but she didn't want to leave her home again, so she carried on as well as she could. A similar situation, however, occurred in 1941 and 1943, when she was hospitalized again. In 1943 she was treated with salazopyrine. She seemed to do very well on this. The patient ascribes her improvement to the fact that the doctor who treated her gave a lot of attention to his patients. He was very kind to her, which gave her great support. However, the morning she came home from the hospital she noticed that someone had been sleeping in her bed. Her husband admitted that he had again had a woman staying with him while the patient was in the hospital. During the quarrel he said, "What are you getting excited about? In another year you'll be rotting away in your coffin." Although she had been in quite good condition when she left the hospital she had abundant diarrhea with blood and mucus again the next day.

This time the patient felt that she couldn't go on this way. Although she disliked the idea that all her circumstances would be known in public, she tried to obtain a divorce. While proceedings were under way her husband was arrested by the German police. She doesn't know why and she never inquired. He was sent to Germany to work in the war industry. She has never heard from him since. After V-E day the patient feared that he would return but he did not. During the interview it became clear that she did not like to think about why he had not come back. She is not sure that he is dead because the authorities never notified her. She admits to the possibility that he is still in Germany living with another woman and might return some day. She noticed that she would have an increase in her diarrhea when his sister came to speak to her about him. A situation which increased her insecurity in these days was the fact that her mother, although very old, had remarried after she had become a widow. The patient felt this to be "a treason to the memory of her father." Since then she has felt that she has lost her home.

This patient was reassured about her frigidity and the proper reasons explained, including the fact that with another man she might be normal. Since her husband was most likely dead, as all the German prisoners who were alive had returned by now, she was advised not to keep in too close contact with his family and to avoid the talks with his sister which seemed to stir up her trouble. The social worker helped her to adapt socially. This simple treatment had an effect which inspired the patient. Some time after she was discharged, she met a "decent person, a serious gentleman, quiet and reliable, just the sort of man my father was. I had long talks with him and they helped me a lot." Her condition has remained satisfactory since then.

THE CONFLICT SITUATION

In the biographical anamneses of these six cases the reader will certainly have recognized the character traits mentioned in the foregoing section of this paper. But the character in itself was not enough to produce ulcerative colitis; in all these cases an acute emotional conflict situation had clearly preceded the outbreak of the disease. In the first case this conflict situation arose because the feared and hated father rudely robbed the patient of his beloved mother so that he not only suffered the loss of his mother's love but was also humiliated as a man. In the second case the forced marriage caused the tie between patient and his mother to be severed abruptly, while his wife made

the patient feel his male insufficiency in a humiliating manner. Possibly the fear of the father-in-law also played a part. In the third case (the details of which were not sufficiently elucidated) disappointment and humiliation which the patient suffered from her husband played an important part while at the same time she was bereaved of the protecting love of her son because of his marriage to a girl she considered inferior. In the fourth case several relapses of the disease occurred after the patient had suffered humiliations from his father, from a rival in love, from his teacher, and from another man on whom he was dependent for shelter. His father drove the patient out of his love relationship with his mother, the rival beat him in the competition for the girl he was in love with and the teacher outwitted him and won the admiration of the pretty female fellow-pupil. Again, a humiliation took place immediately after he was separated from his mother and another while he was in his hideout and the landlady sided against him. The fifth case suffered humiliation because her fiancé made her feel inferior as a woman, whereas up till then she had been her father's beloved child. In the sixth case the disease appeared during the critical period of an unhappy and humiliating marriage. None of the patients had admitted their defeat, but secretly had worried a good deal.

The conflict-situations in all these patients have something analogous. There arose at a certain moment a situation of an acute love-loss. The patients were suddenly deprived of loving cares with which they had been surrounded. Simultaneously these patients, who already doubted the value of their own personality, had to suffer a ***humiliation*** of their innermost pride and self-respect, in a constellation in which they failed as a man or as a woman. Common to all these conflicts was also the abrupt, harsh, almost rude way in which all this took place. Thus a narcissism, which had up till then been artificially nursed and sustained by the cares of a mother or father, or mother- or father-substitute, was acutely offended.

Not only the nature of their conflict but also their attempt at solving it was similar in these patients. They tried to evade it in a manner that was in accordance with their character. Aggressive personalities, in a similar situation would have taken action or would have attacked their opponents in an altercation or emotional outburst. Others would have complained to friends about the humiliation they had suffered, thus procuring themselves a source for unburdening their feelings. In still others what had happened might have led to a psychogenic depression or an hysterical reaction. But these patients reacted differently. Inwardly they continued to sulk, they nursed their grief; but outwardly they tried to appear unaffected. They would admit neither to themselves nor to others how much the conflict had humiliated them. They concealed their weak and passive behavior from themselves and from their environment. Rather than fighting for a victory or acknowledging the defeat, they tried to save their face by denying the importance of the conflict and by not speaking about it. Thus they left their emotional disturbance unsolved. The repression of this special kind of defeat, the outwardly "normal" behavior, the finding of a pseudo solution, while the insufficiency of their own personality had been so rudely revealed to them, the carrying on while they were standing in life helpless, loveless, and without confidence in their own personality—all this appeared to belong to the typical reaction of these personalities.

THERAPY

Psychotherapy was remarkably successful, especially in the first, fourth, fifth, and sixth cases. The first patient, who had undergone the most varied internal treatments for two years without result, was cured within a few weeks. The fourth patient, who during previous attacks of ulcerative colitis had been in the hospital for months on end, was cured through a simple form of psychotherapy within a fortnight, and of a subsequent attack even quicker.

The treatment in these cases consisted of two parts. The first was an emotional catharsis that was not so detailed as would have been the case in a regular psychoanalysis, but which relieved the patient noticeably. The second, constructive part of the treatment was confined to simple encouragement of the patients. I told them not to be ashamed of their great need for love and attachment. Their narcissism was gratified by calling them the more valuable personalities as compared with the father or the teacher, because they had a more refined inner life. I consoled them about their lack of outward success by pointing out that the inner value of one's personality is appreciated only by a limited category of people in this world. I agreed with them in the difference of opinion they had had with their surroundings. Further, by keeping the father or the father-substitute out of their way (which happened to be very easy under the circumstances in both cases) I protected them from a painful recurrence of the conflict situation. The result of this superficial type of treatment was in accordance with its purpose: the colitis cleared up,

but the patients remained neurotics. This was demonstrated by the unsuccessful engagement of Case I.

In the second case, after the catharsis, a considerable improvement was brought about by encouragement and by the prospect of a solution of the difficulties through a divorce. But the patient's character did not change.

The question is whether the author has been right in applying psychotherapy in the way he did. If by treatment is meant a removal of the symptoms, the method has undoubtedly been successful. But if treatment is understood as an analysis of the disturbances in the emotional life, followed by a normal reintegration of the personality, then the therapy in these cases was very primitive indeed. It is left to others to decide whether the doctor acted rightly and whether it is preferable to suffer from a colitis than from an uncured neurosis. After these observations were made, it was found that Lindemann, after thorough investigation of several methods of approach, came to the conclusion that a regular psychoanalysis might actually be harmful in these cases.

In any event, it is not to be denied that purely psychologic treatment, however superficial it may have been, caused this very serious organic disease, which may be so refractory to organic therapy, to clear up with amazing rapidity. This, in turn, provides strong support for the theory that the ulcerative colitis in these cases had arisen not only after, but as a direct result of, the conflict. It is remarkable, and in contrast with the psychoneuroses with which the psychiatrists have to deal, that the cure was effected so rapidly by means of so superficial a therapy.

After the treatment of the six above-mentioned cases the author had the opportunity of observing five more cases of ulcerative colitis. It did not seem necessary to give a detailed account of their case histories. Suffice it to say that the characters and conflicts of these patients corresponded closely with the cited pictures. It is not to be wondered at that the author, who for so many years felt powerless against the problem of ulcerative colitis, has become convinced that psychosomatic medicine provides us with an explanation of the cause as well as with a method for the treatment of this disease.

PSYCHE AND SOMA

Is one justified to draw this far-reaching conclusion on the ground of the cases that have been observed by Murray, Sullivan *et al.*, van der Heide, Lindemann, and the present author? In other words, is it right, after a psychogenesis has been proved to be present in about 80 cases, to conclude that *all* cases of ulcerative colitis are of a psychologic nature? Strictly speaking, this is, of course, not enough. If a certain casual connection between two natural phenomena is observed n times, it does not imply that it will also be present in the $(n+1)$st case. In colitis, however, the process of establishing the etiology is not different from that for other diseases. Only after the tubercle bacillus had been found in tuberculosis a sufficient number of times could it be safely assumed that this micro-organism was the cause of the disease. Many cases of colitis will yet have to be examined to confirm whether a psychic etiology will also apply to other cases. Moreover, it has to be proved that the mental constellation described above is *specific* for colitis, that it is not met in healthy people. Most physicians will probably remain skeptical as yet about the possibility of the psychogenesis of ulcerative colitis. Sufficient evidence has been presented, however, to lead them to take this possibility into consideration. When a sufficient number of investigators have published their experiences, it will then be possible to state with certainty whether ulcerative colitis is *always* a psychogenic disease.

However, the mistake the author made in handling the third case should be avoided. An inquiry after inner conflicts is not a matter to be lightly dealt with. One has to be alone with the patient, one has to take time to listen quietly to him. Further, it is of great importance that the physician who undertakes this task has himself an insight into and a gift for emotional problems, which through inborn qualities and experience enables him to listen to another person's difficulties in an objective but sympathetic manner. The examination and the treatment of patients suffering from ulcerative colitis requires therefore not only technical but also psychologic skill from the physician.

There is another question. Our emotions find their organic basis in the central nervous system. How is it possible that a disturbance which, if localized in the body at all, we are to locate in the midbrain can cause a disease in such a faraway organ as the colon? Along what pathway does the disturbance reach the colonic mucous membrane? Are there any experimental data to prove such an influence of emotions on the colon to an extent that they may give rise to severe organic changes such as bleeding ulcers?

For the time being these data are scarce. Mention may be made of the acute diarrhea which occurs in connection with *great* emotional upsets,

usually of a fearful nature, *i.e.,* examination diarrhea, the soldier's diarrhea due to fear before the first attack, etc. The phenomenon is found especially in individuals who do not find an outlet for their fear in the "normal" way by complaining or by flight, but who want to appear calm and courageous to others, and thereby repress their feelings. On analogy it is conceivable that a *chronic* fear might cause chronic diarrhea. The stimulus would reach the intestine from the central nervous system, probably the diencephalon, via the vagal nucleus and nerve and the autonomic nervous system. The experiments carried out by Lium and Porter may be mentioned in this connection. Lium transplanted parts of the colon of dogs into the abdominal wall and administered to these animals "parasympathomimetic (vagotonic) drugs (pilocarpine)." This caused a strong spasm of the colon. During this spasm the mucous membrane became ischemic. If the ischemia lasted long enough, hemorrhages and erosions appeared. Thus it may be that in conditions of chronic anxiety, giving rise to prolonged spasms of the muscles of the colon, ischemia results. The spasm of the muscularis and of the muscularis mucosae will interrupt the blood supply through the vessels that run from the serosa to the mucous membrane and penetrate perpendicularly through the layer of muscles on their way. To this may be added a constriction of the vessel wall itself. The ischemic patches of the mucosa thus formed may give rise to small necrotic lesions of the epithelium, from which, on relaxation of the spasm, bleeding will occur. But the spasm does not subside completely so that the epithelium is insufficiently supplied with blood. Therefore healing is attempted but it is not complete. Only when the spasm disappears and the blood supply becomes normal again can the mucous membrane regenerate. This would make it clear how aggravations and cures may take place very rapidly in colitis. The theory also gives a certain anatomical substratum to the effect of our psychotherapy, although we are still far from having a complete insight into the long chain of cause and effect that forms the link between an unsolved emotional conflict situation and the anatomical changes in the intestine.

Too organically-minded critics should, however, bear in mind that in the case of the well established bacterial or chemical diseases we also fail to understand the connection between the causative agent of the disease and the anatomical changes it produces. Why does the tubercle bacillus give rise to the specific nodule, the variola virus to the typical small-pox lesion and the bacillus of Bang to the abortus of the cow? Why does the typhoid bacillus produce a continual fever and the brucella abortus an undulant type? Yet we do not doubt that the tubercle bacillus is the cause of tuberculosis, the variola virus that of small-pox, and the Bang bacillus that of infectious abortion. In other words, the fact that the *pathogenesis* is not completely understood does not provide an argument against the psychologic *etiology* of ulcerative colitis. It should at most be a stimulus towards further investigation.

SUMMARY

The author describes 6 cases of ulcerative colitis. Special attention is paid to the character structure of the patients and to the emotional conflicts that preceded the outbreak of the disease. The author comes to the conclusion that patients with ulcerative colitis seem to have certain character traits in common which causes them to react to certain external situations in a similar way. It was demonstrated that every onset or recurrence of the disease was preceded by an emotional trauma which had produced a specific internal conflict. The specificity of the conflict was formulated as an acute love loss, combined with humiliation, which made the patient feel their inferiority as a man or a woman. None of the patients had been able to solve his (her) conflict and had continued to be grieved. The author suggests that the presence of this specific type of unsolved emotional conflict in patients of this character is the cause of the disease. Four of the 6 cases improved rapidly after a simple form of supportive psychotherapy.

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A GROUP STUDY OF THE EFFECT OF GLUTAMIC ACID UPON MENTAL FUNCTIONING IN CHILDREN AND ADOLESCENTS *

FREDERIC T. ZIMMERMAN, M.D., BESSIE B. BURGEMEISTER, PH.D., AND TRACY J. PUTNAM, M.D.

INTRODUCTION

This paper presents the findings of an experimental investigation on the effect of l(+)-glutamic acid upon mental functioning in children and adolescents, a preliminary report of which was recently published by the authors (14). It was suggested by a previous study of Zimmerman and Ross (15) on the effect of glutamic acid upon maze learning in the white rat. In the rat experiment significant differences were obtained in terms of time and accuracy scores, as well as in number of trials required to learn the maze, the glutamic acid group mastering the maze in less than half the number of trials taken by the controls. The enhancement of learning was sufficiently impressive to warrant a study in the clinical field, especially since Price, Waelsch, and Putnam (8), in reporting upon the incidence of petit mal and psychomotor seizures among convulsive patients, observed a "universally increased mental and physical alertness" in the patients so treated, and concluded that the "degree of improvement in mental efficiency could not be correlated with the incidence of seizures."

MATERIALS AND METHODS

Choice of Patients

Of the 69 patients included in this experiment, 28 are children and adolescents with convulsive disorders. Eleven of this latter group of 28 are mentally retarded also. Thirty-three of the 69 patients are mentally retarded without convulsions, and this group plus the group of 11 cited above makes a total of 44 mentally retarded patients considered.

Both neurologic and psychologic criteria were applied in selecting patients in the experimental group. Neurologically, the original selection was designed so as to avoid, as nearly as possible, complicating organic features. This could not be done in every case, however, and because encouraging results were obtained in the preliminary study (14), it seemed desirable to supplement the group with some children who had organic disorders.

Psychologically, a sampling of all age groups from childhood to adolescence at various intellectual levels was obtained. A control group was introduced to ascertain the effect of seizure reduction upon intelligence for varying periods of time, and to determine the retest reliability of intelligence test scores prior to the glutamic acid period.

Dosage

Glutamic acid was administered in gradually increasing doses to the point where increased motor activity was apparent, or where the parents complained about the distractibility and noncooperativeness of the child. Increased motor activity was uniformly observed in our maze experiments on the rat. In man the increased cortical activity may manifest itself in either the motor or psychic spheres, or both. After these indications of effective dosage were apparent, the dose was gradually reduced to the point where the increased activity could be more easily channelized productively. Since the dosage in individual cases is entirely empirical, we have found that the above criteria are the best indications of an adequate dose. In a few instances the evening dose was given at bedtime and resulted in insomnia, until the administration of the third dose was moved back to the late afternoon.

There is no relation between the age of the individual and the effective dose. The dose may range from 6 to 24 gm. a day, but as we increased the number of patients in our experimental group it appeared that higher doses were necessary than seemed indicated in the preliminary report. In most instances between 12 and 24 gm. per day were given in three divided doses. Since most of the acid is lost by metabolism in the liver, by transamination, and by competition of the various organs of the body for this essential amino acid, high doses are usually necessary. Glutamic acid was administered orally, in tablet, powder, or capsule form. Gastric distress was occasionally observed, which was usually controlled either by reducing the dose till the symptoms disappeared, then gradually increasing the dose to an effective level, or else by discontinuing treatment for a few days and then gradually increasing the dosage as tolerance developed.

* From the Department of Neurology, Columbia University College of Physicians and Surgeons, the Service of Child Neurology, Vanderbilt Clinic and Neurological Institute, and the Department of Psychology, Neurological Institute.

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Procedure

Patients in the experimental group were tested at the beginning and end of a six months' period in which they received glutamic acid therapy. They ranged in age from 16 months to 17.5 years, and in intelligence quotient from below 30 to 131 at the time of first test, so that different measuring instruments were required for different age levels, as well as separate treatment of data. Prior to glutamic acid treatment, 60 were given the Stanford-Binet test, Form L, 1937 revision (11); 1 the Wechsler-Bellevue scale (12); and 8 the Kuhlmann-Binet test (4); 60 the Arthur point scale (2) or Merrill-Palmer performance tests (10); and 48 the Rorschach inkblots (9). Retests with the same battery were made after six months.

Results

Table I shows the Stanford-Binet and performance test results for the most seriously retarded children in the experimental group. All of these cases had intelligence quotients below 65 at the beginning of the experimental period. Table II presents Stanford-Binet and performance test results for the entire experimental group taking these specific tests. Figure 1 depicts graphically the increase in mental age on verbal and performance tests during the six months' period of treatment for the entire experimental group, and figure 2 shows the same for the most seriously retarded group. The expected rate of growth for the child of average intelligence is also given.

The average chronologic age for the most seriously retarded group (Table I) was 11 yrs., 8 mos., and the average mental age 5 yrs., 8 mos., intelligence quotient 49.08, prior to glutamic acid therapy. A sigma (σ) of 8.75 represents one standard deviation from the mean, indicating that two-thirds of the scores in the group fell within 8.75 points either side of the mean, or between 41.33 points and 57.83 points. The standard error of the mean was 1.43, denoting practical certainty that the true mean for the group lay between 44.79 and 53.37 points, or three times the standard error.

Following glutamic acid therapy, the seriously retarded group has a mental age of 6 yrs., 8 mos. on

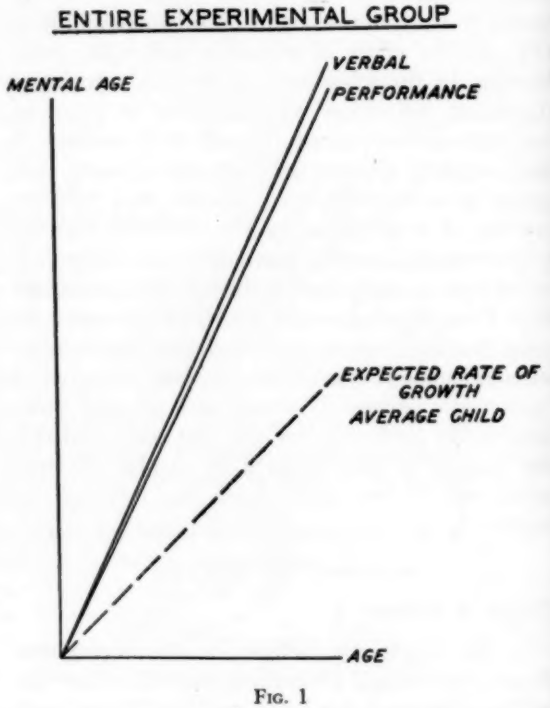

FIG. 1

TABLE I

MOST SERIOUSLY RETARDED CHILDREN IN EXPERIMENTAL GROUP

	Before glutamic acid therapy						After glutamic acid therapy							
Test	Av. age	Number	Mental age 1	I. Q. 1st	σ	$\sigma_{av.}$	Mental age 2	I. Q. 2d	σ	$\sigma_{av.}$	D / $\sigma_{diff.}$	Change mental age +	Point change I. Q. +	Chances of a real difference
Stanford-Binet	11 yrs., 8 mos.	38	5 yrs., 8 mos.	49.08	8.75	1.43	6 yrs., 8 mos.	55.39	9.45	1.54	3.02	12 mos.	6.31	Certainty
Performance	.....	36	6 yrs., 1 mo.	....	1.76	.29	6 yrs., 10 mos.	....	1.76	.29	1.88	9 mos.	...	96 in 100

TABLE II

ENTIRE EXPERIMENTAL GROUP TAKING THESE SPECIFIC TESTS

	Before glutamic acid therapy						After glutamic acid therapy							
Test	Av. age	Number	Mental age 1	I. Q. 1st	σ	$\sigma_{av.}$	Mental age 2	I. Q. 2d	σ	$\sigma_{av.}$	D / $\sigma_{diff.}$	Change mental age +	Point change I. Q. +	Chances of a real difference
Stanford-Binet	11 yrs., 2 mos.	60	6 yrs., 10 mos.	62.67	23.40	3.02	7 yrs., 11 mos.	69.67	24.47	3.16	1.65	13 mos.	7.00	95 in 100
Performance	.....	52	7 yrs., 3 mos.	....	2.89	.40	8 yrs., 3 mos.	....	3.63	.50	1.50	12 mos.	...	94 in 100

the Stanford-Binet test, showing a gain of twelve months in mental age during the six months' treatment period. (See figure 2.) This suggests a rate of development which is twice as fast as that found among children of average intelligence, since in the average child a gain of only six months in mental age usually accompanies a change of six months in chronologic age. The intelligence quotient is also raised 6.31 points to 55.39, with a standard deviation of 9.45 and a standard error of 1.54. The dispersion of retest scores is slightly wider at the

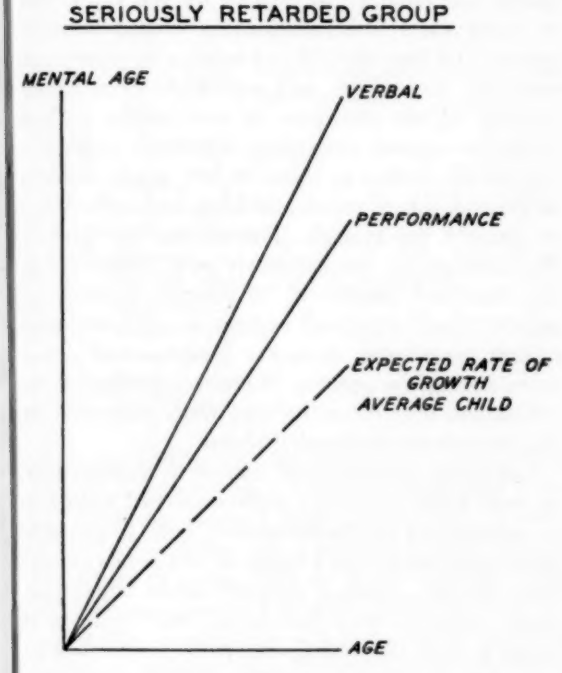

FIG. 2

end of the experimental period, reflecting more variability in individual retest performance. A critical ratio ($D/\sigma_{diff.}$) of 3.02, however, is sufficient to insure a statistically significant difference between the intelligence quotients of the retarded group before and after glutamic acid therapy, *i. e.*, one which is not due to chance factors.

For the entire experimental group (Table II) a gain of thirteen months in mental age from 6 yrs., 10 mos., to 7 yrs., 11 mos., during the six months' treatment period, ratio 2 to 1, is in keeping with the progress of the seriously retarded group. (See figure 1.) An increase in intelligence quotient of 7 points, from 62.67 to 69.67, and a critical ratio of 1.65, gives 95 chances in 100 that a genuine improvement in intelligence quotient took place following the glutamic acid treatment.

The entire experimental group reveals slightly more rapid improvement on performance tests (twelve months gain in mental age in six months, from 7 yrs., 3 mos., to 8 yrs., 3 mos.) than does the seriously retarded group (nine months gain in mental age in six months, from 6 yrs., 1 mo., to 6 yrs., 10 mos.). (See Tables I and II.) This is, in all probability, due to the amount of basic neurologic disturbance in the latter group. Both groups, however, show more than the normally expected increase in scores, which is six months during a six-month interval. The chances of a statistically significant difference in retest performance ratings for the two groups are 96 and 94 chances in 100, respectively. Some gain in retest performance scores is to be explained in terms of growth, however, because the group is six months older at the time of the second test, although increase in chronologic age proved to be a negligible factor in the retest performance scores of the control group prior to glutamic acid treatment (page 180). It is also unlikely that six months increase in chronologic age would be of great importance in such low grade children as our subjects were.

TABLE III

RESULTS OF THE WECHSLER-BELLEVUE TEST

	Initial test	Re-test
Full scale quotient	107 (average)	120 (superior)
Verbal quotient	106	116
Performance quotient	105	119
Sub-tests		
Information	11	11
Comprehension	11	11
Arithmetic	12	17
Digits	9	9
Similarities	8	11
Vocabulary	13	13
Picture Completion	10	10
Picture Arrangement	12	17
Object Assembly	9	11
Block Designs	10	13
Digit-Symbols	13	14

One subject, age 17.5 yrs. at the beginning of the glutamic acid period, was given the Wechsler-Bellevue test. On both verbal and performance sections (Table III) striking improvement is observable, the full-scale intelligence quotient being raised 13 points from 107 to 120, or from the average to the superior range. The verbal section consists of informational questions; comprehension problems requiring common sense and an understanding of social situations; simple oral arithmetic problems; repetition of digits in forward and reverse order; and similarities among various pairs of

things. The vocabulary test is an alternate test and is not included in computing the intelligence quotient.

As may be seen, the greatest change on the verbal section of the test took place on the arithmetic problems, where a gain of 5 points appears upon retest. Similarities, involving abstract thought, is next, with an increase of 3 points in retest score. The information and vocabulary scores remain unchanged, as might be expected, inasmuch as they are dependent upon previous learning and are less subject to alteration over so short a period of time than are tests where more recent learning is required, or where new situations are encountered.

On the nonlanguage section, the battery is composed of picture completion, requiring the discernment of missing details; picture arrangement, where a sensible solution depends upon a correct interpretation of the sequence involved in various social situations; object assembly, necessitating the solution of three puzzles; block designs, which require the reproduction of given designs by the use of blocks, and which stress concept formation; and digit-symbols, where emphasis is placed upon the ability to form new associations quickly.

The most striking improvement on the performance section of the test occurs on picture arrangement, where a 5 point rise is indicated. Block designs, object assembly and digit-symbols also show gains, suggesting slightly more change for the performance tests as a whole than for the verbal tests. This fact is reflected in an increase in total performance quotient of 14 points, from 105 to 119, as compared with a gain of 10 points, from 106 to 116, in the verbal test scores.

As was pointed out by the authors in a preliminary report (14), it seems wiser to substitute "score" for intelligence "quotient," when interpreting test results other than those on the Stanford-Binet scale, because the linear relationship between chronologic and mental age does not hold for adult groups. Nevertheless, the retest scores for this patient on the Wechsler-Bellevue test following glutamic acid therapy show the same striking improvement as was found for the experimental group using the Stanford-Binet scale.

Kuhlmann-Binet

Results in the main support the other test findings. Differences in age, intelligence, diagnosis, etc., do not warrant reporting upon the 8 cases as a group.

Rorschach

The Rorschach inkblots were presented to 48 children and adolescents before and after glutamic acid treatment. The retest protocols reveal quantitative and qualitative changes, and are generally more dynamic following glutamic acid therapy. Because of lack of homogeneity among our patients regarding diagnosis, age, and intelligence quotient, however, it is of little value to combine results for the entire experimental group.

Initial records of the most seriously retarded children, *i. e.*, those with intelligence quotients less than 65 at the beginning of the experimental period, are meager and stereotyped. Frequently only one response was obtained to each of the ten cards, and in many cases little relationship existed between concept and blot, the children tending to perseverate upon an idea which was acceptable to them regardless of the structure of the inkblot. Their records as a group were characteristically unproductive, being similar to those of low grade children in general, where paucity of ideas and inflexibility of thought are typical. Thirty-seven per cent of the form quality was extremely poor (minus). On the Rorschach records of 10 patients features appeared which suggested organic interference with mental functioning, *i. e.*, the likelihood of actual brain damage in addition to limited intellectual development, and these findings were supported by clinical data in the hospital charts.

Following glutamic acid, consistent improvement in form level is revealed with a marked reduction in inaccuracies of discrimination, only 19 per cent of the concepts reported being of very poor (minus) form quality. Such a finding would suggest an improvement in form perception, and would be in keeping with the verbal and performance test results showing genuine improvement in mental functioning. As a whole, organic interference with mental functioning is slightly less prominent in the retest records. A greater facility for perceiving details is also apparent, and popularly seen responses, *i. e.*, those reported by the population in general, increase by 6 per cent. This appears to reflect better social and emotional adjustment in many instances, suggesting that basic changes in the personality structure may take place during glutamic acid therapy.

Analysis of Patterns

An item analysis of Stanford-Binet test answers for the entire experimental group of 60 patients was made, and Table IV shows those tests which reveal the greatest improvement following the glutamic acid interval.

Table IV indicates that the maze problems which appear on the Stanford-Binet test at the VI Year level were passed by 13 more of the children upon retest than upon first presentation at the beginning

of the glutamic acid period. No failures occurred on this test among children who passed it originally, so that it comes first on the list of items showing the greatest improvement at the end of the glutamic acid therapy. Memory for sentences, involving a verbatim repetition of a sentence given orally (Year VIII) and finding two reasons why children should not be too noisy in school (Year X), are second with 12 children who failed the tests at the beginning of the experimental period passing them upon retest.

TABLE IV

STANFORD-BINET ITEMS SHOWING GREATEST IMPROVEMENT UPON RETEST

Number adding test	Test	Year level
13	Mazes	VI
12	Memory for sentences	VIII
	Finding reasons	X
11	Materials	IV-6
	Copying a bead chain from memory	VI
	Similarities	VII
	Comprehensions	VIII
	Repetition of 4 digits reversed	IX
	Problem situation	XI
9	Similarities	XI

Eleven children added materials at IV-6, which consists of stating what a chair, a dress, and a shoe are made of; copying a bead chain from memory (Year VI); giving the similarity between two of three sets of items, such as wood and coal (Year VII); comprehensions at Year VIII, which include acceptable answers to questions such as "What makes a sailboat move?"; and repetition of four digits in reverse order at Year IX. At Year XI a problem situation involving correct interpretation of a story was also added by 11 children. Nine more patients were able to pass the similarities test at Year XI at the end of glutamic acid treatment, the latter consisting of giving similarities among three things, such as "a snake, a cow, and a sparrow."

Of 516 changes in Stanford-Binet retest items following glutamic acid therapy, 90 per cent are additions, and only 10 per cent failures of tests which were passed at the beginning of the experimental period.

Performance test results for the Arthur Point Scale reveal the following pattern as regards degree of test change (Table V). Merrill-Palmer scores are not included here because of the smallness of the group taking those tests.

Most improvement occurs on the Casuist formboard, which is one of the more difficult boards requiring the ability to construct circles and a more complicated geometric figure by fitting the proper wooden pieces into holes on the board. Scores in Table V are for children who completed the formboard at the beginning of the experimental period. As may be seen, the average for the group was 150.00 secs. with a standard deviation of 62, and a standard error of 10.33. Following glutamic acid therapy, the average time for solving this puzzle is reduced to 116.70 secs. (sigma 76.80 $\sigma_{av.}$ 12.80). A critical ratio of 2.02 between the two test averages gives practical certainty (98 chances in 100) of genuine improvement in performance upon retest. That reduction in time needed for solution following the experimental period is not due to speed alone but to better form discrimination seems suggested by the fact that the Seguin board, which is a much simpler formboard, does not show a similar decrease in reaction time (22.90 secs. before glutamic acid and 21.60 secs. following glutamic acid) using the child's best time on three trials. It is believed that the latter test is more dependent upon speed than upon form perception.

Of special interest is the fact that on verbal tests improvement in maze tracing is first, while on the Arthur Scale it is second. Ability to complete mazes is thought to depend upon foresight and planning, and to reflect quite some degree of emotional stability. Results, therefore, appear to indicate better emotional adjustment at the time of retest, as

TABLE V

ARTHUR POINT SCALE PATTERNS

	N	Average 1st score	σ	$\sigma_{av.}$	Average 2d score	σ	$\sigma_{av.}$	$\frac{D}{\sigma_{diff.}}$	Chances of a real difference
Casuist formboard	36	150.00 secs.	62.00	10.33	116.70 secs.	76.80	12.80	2.02	98 in 100
Porteus mazes	37	8.62 yrs.	3.54	.58	9.86 yrs.	4.00	.66	1.42	92 in 100
Kohs blocks	38	19.50 yrs.	10.60	3.34	27.38 pts.	28.60	4.64	1.38	92 in 100
Mare and foal	35	50.56 secs.	36.20	6.14	40.86 secs.	24.00	4.07	1.32	90 in 100
Picture completion	39	230.40 pts.	141.00	22.59	279.00 pts.	188.00	30.12	1.30	90 in 100
Feature profile	40	7.85 pts.	2.32	.36	8.52 yrs.	2.88	.46	1.17	87 in 100
Knox cubes	35	5.82 correct	2.10	.36	6.36 correct	2.00	.33	1.10	86 in 100
Seguin formboard	37	22.90 secs.	10.00	1.65	21.60 secs.	11.30	1.85	.57	71 in 100

well as improved mental functioning, and this was the impression gained clinically as well as from the Rorschach records.

Most of our children did not reach the XIII Year level on the Stanford-Binet test where a more complicated plan of search for a purse lost in a field is required than is involved in the maze-tracing problems at Year VI. The difference in approach on the plan of search problem before and after glutamic acid (figure 3) by the 2 children having the highest

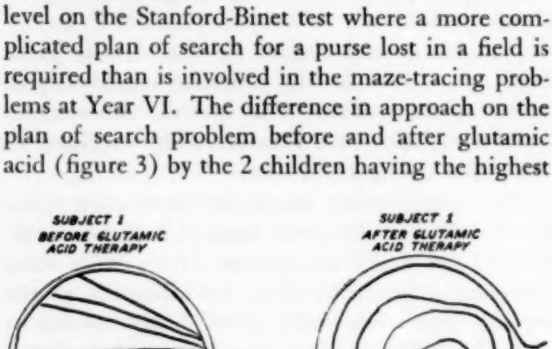

FIG. 3. Plan of search.

intelligence quotient at the beginning and end of the experimental period, however, serves to confirm the impression that, in general, a qualitative as well as a quantitative change occurred, with increased facility for solving problems of the maze-tracing type, following glutamic acid treatment.

Control Group

Our control group consists of 37 mentally retarded or convulsive patients who had been given psychometric tests in Vanderbilt Clinic over a period of six months to eight years prior to glutamic acid therapy, and who were again tested at the beginning of the experimental period. Seizure reduction or control did not result in an increase in intelligence quotient, as was pointed out by the authors in a preliminary report (14), where the influence of anticonvulsive medication upon intelligence test scores was discussed at some length. Fifty-one tests on these patients were used as controls so that we could also study the possible effect of practice upon retest intelligence quotients. Following a test at the beginning of glutamic acid treatment, the 37 children were considered as part of the experimental group.

Table VI gives the chronological age, mental age and intelligence quotient of the control group on previous psychometric tests, as well as on the test just prior to glutamic acid therapy.

The average chronologic age of the control group was 8 yrs., 4 mos., upon previous psychometric tests, with a mental age of 5 yrs., 5 mos., intelligence quotient 62.84. At the beginning of the experimental period the average chronologic age was 11 yrs., 3 mos., indicating an average interval of almost three years (2 yrs., 11 mos.) between the two sets of tests. During this time, however, the average mental age of the group increased only eighteen months to 6 yrs., 11 mos., thereby resulting in a slight reduction of 1.08 points in retest intelligence quotient, from 62.84 to 61.76, prior to glutamic acid therapy. Results indicate 60 chances in 100 of a true decrease in retest intelligence quotient just before the beginning of the experimental period. A decrease in intelligence quotient (which represents the ratio of mental age to chronologic age) might be expected of children with this degree of mental retardation since, under ordinary conditions, the discrepancy between chronologic age and mental age tends to grow wider as chronologic age increases. Our findings therefore agree closely with the results of studies on retarded children reported in the literature, as far as the control group is concerned.

Because the time interval between psychometric tests is a large one which is not uniform, performance test scores for the control group are more difficult to interpret, due to the growth factor. An average gain of only 9.17 months in mental age during an interval averaging 2 years, 11 months between tests, however, suggests little improvement in motor skill prior to the glutamic acid period. In contrast to this, the control group gained 12.04

TABLE VI

	N	Age	Mental age	I. Q.	σ	$\sigma_{av.}$	$\frac{D}{\sigma_{diff.}}$
Previous psychometric tests	51	8 yrs., 4 mos.	5 yrs., 5 mos.	62.84	19.99	2.66	
Test prior to glutamic acid	37	11 yrs., 3 mos.	6 yrs., 11 mos.	61.76	21.43	3.54	−.24

months in mental age during the six months of glutamic acid treatment.

DISCUSSION

On the Stanford-Binet test the experimental group of most seriously retarded children shows a statistically significant increase in retest intelligence quotient following glutamic acid therapy (Table I), *i.e.,* one which shows genuine improvement not due to chance factors. Although some of the patients had been tested several times previously, a similar gain was not obtained for the control group (Table VI). In fact, a decrease in intelligence quotient appears in the control group, as might be expected of children with this degree of mental retardation. In terms of mental age, a gain of twelve months in the retarded experimental group during the six months' treatment period suggests a rate of development which is twice as fast as that found among children of average intelligence (figure 2).

For the entire experimental group, where the dispersion of test scores is much greater, a rise of 7 points indicates practical certainty (95 chances in 100) of a genuine increase in retest intelligence quotient following glutamic acid therapy. The rate of development reflected by thirteen months' increase in mental age in six months is in keeping with the progress of the seriously retarded group.

Performance tests on both groups show rapid improvement following the glutamic acid interval, and although some gain in mental age is to be explained in terms of growth, growth alone certainly cannot account for the striking progress made. Prior to the experimental period, it did not have a similar effect upon motor skill, as evidenced by the results of the control group on performance tests (page 180).

The motor tests, on the whole, show greater variability than does the Stanford-Binet material, and in many instances a close relationship is not indicated between the amount of change in verbal and performance retest scores in individual cases. Group retest averages, however, are consistently higher on both verbal and performance batteries following glutamic acid therapy.

Practice effect must also be considered in interpreting verbal and performance test results. In our control group, the scores of children who had been tested several times prior to glutamic acid therapy were not raised due to practice, and it is believed that practice was a negligible factor in the re-test scores in our experimental group. In this, our findings agree with those of Albert, Hoch, and Waelsch (1), where the introduction of placebos during glutamic acid therapy resulted subsequently in a marked reduction of scores in spite of the fact that the time interval between test and retest was very short, thereby enhancing practice effect. Soon after glutamic acid was resumed, the retest scores again showed striking rises, suggesting that the action of glutamic acid was of paramount importance in accounting for the reported improvement.

Our Rorschach results suggest that glutamic acid has an effect upon mental functioning which is measurable not only by intelligence and performance tests, but which reflects itself in basic personality changes, under the conditions of our experiment. Because the experimental period was a short one (six months), research is being continued to ascertain the ceiling effect of glutamic acid upon intelligence, and its influence upon personality.

Results of our experiments to date have important theoretical implications concerning the nature of intelligence, and favor a more dynamic and flexible definition of intelligence than was formerly implied in much of the psychologic literature on the subject. It is in keeping with recent trends such as are reported by Garrett (3), where he states that "an intelligent person does not possess 'intelligence' but rather exhibits the capacity to act intelligently (make a high score) when faced by tasks demanding the use of symbols (words, diagrams, numbers, mazes) in their solution." It is our belief that glutamic acid enhances this "capacity to act intelligently" in human beings, just as it enhanced maze learning in the white rat.

The rationale for the use of 1(+)-glutamic acid in the treatment of defective mental functioning is based upon a number of experiments which indicate a particular relationship to cerebral metabolism. It has been reported by Weil-Malherbe (13) that 1(+)-glutamic acid is the only amino acid capable of maintaining the oxygen uptake of sliced brain tissue. The recent investigations of Nachmansohn and his associates (5) indicate that the electrical changes during nerve activity are intrinsically connected with the release of acetylcholine. They also isolated an enzyme, choline acetylase, which synthesizes acetylcholine (7). This enzyme, choline acetylase, becomes inactive on dialysis, but the addition of 1(+)-glutamic acid reactivates the enzyme (6).

On the basis of the observed facts that acetylcholine is intrinsically connected with nerve activity and that the rate of formation of acetylcholine is increased in the presence of glutamic acid in vitro, it is possible to assume that the physiologic basis of our observed effects of glutamic acid is somehow related to the formation of acetylcholine. This seems to be the best interpretation at present.

CONCLUSIONS

1. Glutamic acid accelerates mental functioning in human subjects.

2. This facilitation in mental functioning is a general effect and is indicated on verbal, motor, and Rorschach tests.

3. The most striking changes appear in the seriously retarded group, where statistically significant differences are obtained between test and retest intelligence quotients.

4. Greater improvement occurs on tests requiring abstract thought than on those involving motor skill.

5. In many cases, a greater degree of emotional stability results.

6. Since these changes occurred over a short period of time (six months), research is being continued to determine the ceiling effect of glutamic acid upon intelligence.

APPENDIX

Although the study is primarily objective, clinical observations in the main support the quantitative findings, and clinical abstracts of 9 cases are included in the preliminary report (14). Following are abstracts of the 2 children who showed the greatest point gain in retest intelligence quotient following the experimental period.

Case 1: A female child, 9½ years of age, with a history of retarded mental development from birth, at which time she suffered with erythroblastosis fetalis. She was born prematurely. Repeated psychometric examinations before beginning glutamic acid therapy showed no improvement in her intelligence. Her speech four years before treatment was described as "almost unintelligible due to poor enunciation." She was given 4 grams of glutamic acid three times a day and the mother, who was a good observer, noted no change one month later. The dose was then doubled to 8 grams three times a day. One month later the mother reported the child was "picking up an interest in reading and was able to jump rope." She also noticed that the patient was able to bounce a ball with better coordination and not only was beginning to read but was "adding a few simple numbers." She became quite interested in school. Because of a drug shortage it was necessary to reduce the amount of glutamic acid for one month to the original amount of 4 grams three times a day. The mother did not note any improvement and said the child had "become disgusted with school."

The dosage was increased to 24 grams a day and around the six months period the mother reported that people who had not seen the child for several months and did not know about the treatment commented on the "remarkable improvement" in the child. At the end of the six months' treatment period the intelligence quotient (Stanford-Binet) was found to have risen 18 points, from 69 to 87.

Case 2: A boy, 16 years of age, known to Vanderbilt Clinic since shortly after birth. Weighed 8 pounds at birth and 13 pounds at three months. Did not gain any more weight till the age of thirteen months, when he was placed on thyroid medication. X-rays at 7¾ years revealed a moderate delay in the development of the skeleton in the wrists as evidenced by the absence of the ossification center at the distal epiphysis of the ulna, which is usually present at the end of the sixth year. Roentgen examination at 9 years revealed maturation approximately normal for this age. He was continued on thyroid up to and including the period of glutamic acid therapy. While thyroid medication accelerated growth, it had no effect upon his intelligence quotient, as indicated by repeated tests in the Clinic. He was also known as a serious behavior problem in school.

Following a psychologic examination he was given glutamic acid, 8 grams three times a day. Two months later he looked brighter and his mother said that he took delight is playing checkers with his grandfather each night, something he was never interested in before. His disposition was better, he was more alert. Previously he "was irritable and never could take teasing—now he comes back with his own little remarks."

His mother said also, "He seems interested in reading the paper. He never wanted to do it before. Of course, I have to help him with the big words, but he picks up the paper spontaneously and tries and is really interested."

Two months later he showed an interest in baseball and asked to be taken to a game for the first time. He was more inquisitive—"began to ask a lot of questions which he never did before."

During the sixth month of treatment his teacher reported he was more adaptable in school and was being changed to a different school. A friend who hadn't seen him for several months and did not know about the treatment remarked that he appeared much brighter and more alert. He also began to travel on the subways alone. His intelligence quotient (Stanford-Binet) rose 16 points, from 50 to 66, at the end of the six months' treatment period.

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AUSTEN RIGGS FOUNDATION DIRECTORS APPOINTED

Dr. Robert P. Knight, at present Chief of Staff of the Menninger Clinic, has been appointed Medical Director of the Austen Riggs Foundation in Stockbridge, Massachussetts, and will assume his duties there on September 1st. Dr. Edgerton McC. Howard, who has been functioning as Acting Medical Director of the Riggs Foundation, is assuming the position of Associate Medical Director.

The Austen Riggs Hospital was founded in 1919 by the late Dr. Austen Fox Riggs for the treatment, study, and training in therapeutic procedures of the psychoneuroses.

SOME PSYCHOSOMATIC ASPECTS OF ALLERGIC DISEASES *

JOHN H. MITCHELL, M.D., CHARLES A. CURRAN, PH.D., AND RUTH N. MYERS, B.S.**

That psychologic factors have been considered etiologically significant in allergic diseases is evident from the many references found in medical literature. Hyde Salter (12) emphasized the importance of the psychogenic factor in asthma over sixty years ago. The Asthma Research Council (3) in their "Report of Progress" for the year ending October 31, 1937, states:

We are about to publish the results of inhalant protein treatment for both asthmatics and patients with rhinorrhoea. In the latter group we find that of thirty-five cases treated, fourteen showed either cure or considerable improvement, five showed some improvement and sixteen showed no improvement. The figures of improvement are not dramatic, but they are encouraging when we take into consideration the intractability of these cases and the fact that they are probably less susceptible to spontaneous improvement than asthmatics. An interesting feature of the results is that the recovery or improvement rate was in inverse proportion to the numbers of positive skin tests. The group considered is small although carefully selected but this finding requires further elucidation. It may be that our method of doing skin tests is unsatisfactory and this point too is to be investigated during the coming year.

We are now investigating a control series of patients with rhinorrhoea treated with normal saline alone instead of inhalant proteins and this group will serve as an interesting check on the figures previously quoted.

And again:

Dr. Strauss has continued his investigations of the psychogenic factor in asthma and has concluded that psychic factors contribute to the asthma syndrome in even greater measure than had been thought likely. Further work on this subject is being carried out in the Psychological Department.

The "Report of Progress" (3) the following year comes to the conclusion that there is even greater evidence for psychologic factors in vasomotor rhinitis.

The Clinic has continued the policy which it has found successful in practice of making a close and accurate study of small but carefully selected groups of patients. Two outstanding observations have been made. (1) It has been found that the results of general treatment without specific treatment are at least as good as the results of general treatment combined with desensitisation to inhalant proteins and better than those obtained by desensitisation alone. The results of vaccine therapy have not yet been worked out with the same thoroughness as those of protein desensitisation although work is being done on this aspect at the moment, but preliminary work does not lead us to expect any dramatic confirmation of the value of vaccines in the treatment of asthma. (2) There has also been further clear evidence of the importance of the psychological factor, this time in the effects of treating cases of rhinorrhoea with normal saline only.

Last year we mentioned the results obtained by the treatment of rhinorrhoea with solutions of inhalant proteins and we reported that of 35 cases treated 14 showed either cure or considerable improvement, 5 showed some slight improvement and 16 showed no improvement.

This year we treated a similar group with normal saline solution only, instead of the solution of mixed inhalant proteins, and the results were somewhat startling, since of the 32, 13 were cured or much improved, 6 showed some improvement and 13 showed no improvement. In other words, the results of treatment with saline solution were slightly better than those obtained by protein desensitisation. The group was small but the results are instructive.

From the recent results it appears clear that the psychological element was of even greater importance than we had anticipated.

Eyermann (5) stresses the emotional factors in certain cases of asthma, but warns against too great a bias by psychiatrists and allergists alike:

It seems that those interested in allergy pay too little attention to the psyche and that those interested in the psychic conditioning of bronchial asthma are not aware of the possible allergic explanations for the vagaries of this disease.

And again:

It is not necessarily true that bronchospasm will vanish immediately when the offending allergen is avoided. When bronchospasm occurs frequently, it becomes a conditioned reflex, and the bronchi retain this reaction as tenaciously as they previously maintained a normal function, so that a full rectum, or a distended stomach, or a turgescent turbinate, or an emotional stimulus may become a trigger mechanism which provokes a spasm through the vegetative nervous system, not only during the period of absorption of an allergen but also for some time after such an allergen is avoided. The clinical evidence at the present time is that these stimuli will induce bronchospasm only in allergic individuals.

In summary, he says:

If the asthma is unassociated with personality problems, one should treat it as such, having due thought of the probability of inducing unfavorable emotional influences by inept emphasis upon diagnostic procedures and by unconsidered insistence upon therapeutic measures of indeterminate outcome. If the asthma is associated with emotional instability, one must treat the patient with all his problems as well as the local complaint.

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** The Allergy Clinic, College of Medicine, Ohio State University.

Halliday (6) places asthma in the psychosomatic category and defines a psychosomatic affection as "A bodily disorder whose nature can be appreciated only when emotional disturbances (*i. e.,* psychological happenings) are investigated in addition to physical disturbances (somatic happenings)." He also gives a Psychosomatic Formula which will aid in the understanding of these patients.

THE PSYCHOSOMATIC FORMULA

1. Emotion as precipitating factor.—Examination of patients in series shows that in a high proportion of cases the bodily process emerged, or recurred, on meeting an emotionally upsetting event.
2. Personality type.—A peculiar type of personality tends to be associated with each particular affection.
3. Sex ratio.—A marked disproportion in sex incidence is a finding in many, perhaps most, of these disorders.
4. Associations with other psychosomatic affections.—Different psychosomatic affections may appear in the same individual simultaneously, but the more usual phenomenon, as revealed in their natural history, is that of the alternation or of the sequence of different affections.
5. Family History.—A significantly high proportion of cases give a history of the same or of an associated disorder in parents, relatives and siblings.
6. Phasic manifestation.—The course of the illness tends to be phasic with periods of crudescence, intermission and recurrence.

Karnosh (7) states the following:

Even though one cannot establish a causative relationship between allergy and nervous and mental disease, it can be said that almost always, to some degree, the two afflictions are concomitant in the same person. No allergic person can be adequately evaluated without considering the personality structure in which the disease is implanted.

The psychosomatic aspect is not, of course, accepted by everyone. There are those allergists who feel that many, if not all, patients who have pathologic symptoms and signs identical with allergy but negative skin tests are truly allergic; the antigens have not been discovered; they may be of intrinsic origin; the real problem for them is to find a method of approach for a study of this condition.

It seemed desirable to examine our own material to determine the role of psychogenic factors in the production of allergic symptoms or symptoms commonly considered allergic by general practitioners and most allergists. Records of 100 consecutive cases of each of six common allergic syndromes seen in private practice were reviewed and data noted concerning sex, age at the time the patient consulted us, and presence or absence of positive skin tests.

As will be noted in Table I, the cases of ragweed hay fever and perennial extrinsic asthma present a common pattern in that sex distribution is approximately equal, although in each instance there are slightly more males than females. These two manifestations of allergy are found more commonly in the early decades, that is, below 30 years of age. Sixty-three per cent of ragweed hay fever and 77 per cent of perennial extrinsic asthma occurred in patients who were under 30 years of age when they came to us. In this group all patients gave positive skin tests by the prick method to substances which correlated with the clinical history and were considered of major etiologic significance in the production of symptoms. The results of specific avoidance or immunization were highly successful. In the remainder of the paper this group will be referred to as Group A—the typically allergic group.

In the cases classified as perennial vasomotor rhinitis, intrinsic asthma, and chronic urticaria, the skin tests were negative, and the clinical histories and clinical trial failed to afford any positive evidence that specific antigens could be causing the symptoms. There were no anatomical changes in the thorax, such as fixed emphysema, bronchiectasis, chronic purulent bronchitis, heart disease, or tumor, to account for asthma, and there was no sinus infection or anatomic deviations in the nose which could account for the symptoms of vasomotor rhinitis. Therapeutic results by allergic as well as various other methods were uncertain, unpredictable, and generally unsatisfactory.

About one-half the patients manifesting atopic eczema gave positive skin tests, yet the reacting substance could rarely be incriminated as a cause of the eczema. When a skin-reacting food, such as egg, was deliberately fed, acute symptoms referable to the gastrointestinal tract or localized urticaria often developed, but seldom did any increase in severity of eczema result. Neither did eczema disappear or consistently subside when the patient did not eat egg. Infants frequently evidence marked edema of the skin on contact with egg white or even egg shell, yet the skin does not become eczematized at the site of contact. Positive, immediate wheal reactions to foods seem to be evidence of past, present, or future allergy of the acute edematous variety, but do not signify that the food is capable of producing the eczematous skin reaction which these patients exhibit.

Two cases were encountered among the 100 examined which gave immediate wheal reactions to house dust and to horse dander respectively, and whose eczema was competely relieved by change of environment. However, patch testing with house dust or horse dander did not produce eczema at

the contact site. The youth who was considered sensitive to horse dander cleared completely when he was away from home for a week or two. His sister rode horses frequently and this seemed the obvious explanation of his difficulty. However, his subsequent experiences are revealing. He was inducted into the Army in May 1943, having considerable eczema at the time, which cleared during the period of basic training. He was then sent to Officer Candidate School, where he felt under a great deal of pressure. The eczema immediately became much worse, so much so that he was transferred to the infantry. Here, he remained clear in spite of the fact that he was engaged in active combat in the European campaign and slept in barns with horses or where horses had been stabled. On returning home he re-entered college and his eczema promptly returned. He volunteered the information that "I think nervous strain, especially that associated with hard study, is the main cause of my skin trouble." Our data would seem to indicate that most cases of atopic eczema should be placed along with perennial vasomotor rhinitis, intrinsic asthma, and chronic urticaria in a second group of patients, which shall be designated Group VM.

Contrast now the data on the Group VM cases with that of Group A (Table I). In Group VM, females predominate 2 to 1. Sixty-four per cent of perennial vasomotor rhinitis, 54 per cent of intrinsic asthma and 66 per cent of chronic urticaria occurred between the ages of 20 and 50. In the first decade, atopic eczema was equally distributed between boys and girls, but during the two decades, age 10 to 29, girls predominate 23 to 5.

This mathematically significant deviation in sex and age distribution between Group A and Group VM probably indicates a basic difference in the etiology of the two groups. That such a basic difference did exist was strongly suspected on clinical grounds, and led to the investigation of the problem.

Since patients complaining of year-round nasal symptoms characterized by sneezing, nasal obstruction, and a clear watery discharge so frequently consult the allergist, and yet were the ones which he is so often unable to help, we examined the records of 147 consecutive cases as to age, sex, and presence of positive skin reactions by the prick method. The records were separated arbitrarily into two groups on the basis of whether positive skin tests were obtained or not. In Table II positive reactors are listed as allergic; the negative reactors as vasomotor. Those whose symptoms promptly disappeared within a few days after discontinuing nose drops are listed as "nose drops." It should be emphasized that the persistent use of nose drops often aggravated the symptoms in the other groups, and it was often necessary to urge their discontinuance, but cessation of symptoms did not follow; and more basic factors had to be considered in the etiology.

TABLE I (600 CASES)

	GROUP A				GROUP VM							
	Ragweed Hay-Fever		Perennial Extrinsic Asthma		Atopic Eczema		Perennial Vasomotor Rhinitis		"Intrinsic" Asthma		Chronic Urticaria	
Age	M	F	M	F	M	F	M	F	M	F	M	F
0-9	9	3	20	14	31	36	6	5	12	9	0	0
10-19	10	11	16	6	3	15	7	6	1	4	1	7
20-29	16	14	11	10	2	8	4	14	4	9	7	24
30-39	9	10	4	5	1	2	5	25	3	17	8	12
40-49	7	3	2	5	0	2	6	10	10	11	7	18
50-59	4	2	5	0	0	0	2	6	0	12	7	7
60-69	0	1	1	1	0	0	1	3	2	6	1	1
70-79	0	1	0	0	0	0	0	0	0	0	0	0
Total	55	45	59	41	37	63	31	69	32	68	31	69

TABLE II

PERENNIAL NASAL SYMPTOMS (147 CASES)

	Skin Tests Positive (Allergic)		Skin Tests Negative (Vasomotor)		Skin Tests Negative (Nose Drops)	
Age	M	F	M	F	M	F
0-9	0	4	6	4	0	0
10-19	11	5	5	6	0	0
20-29	5	5	6	13	0	2
30-39	0	3	6	26	0	1
40-49	2	1	4	15	1	0
50-59	0	0	4	6	0	0
60-69	0	0	3	2	0	0
70-79	0	0	0	1	0	0
	18	18	34	73	1	3

Trends similar to those noted in Table I are seen here. The allergic patients are equally divided as to sex, and symptoms occur in the early decades; while vasomotor rhinitis is encountered twice as often in women, the majority being in the middle

decades (20-50). Of these 147 cases, 24.6 per cent were allergic, 72.7 per cent vasomotor rhinitis and 2.7 per cent due solely to the persistent use of nose drops. Nose drops were frequently encountered as an aggravating factor in the vasomotor cases.

From our experience in history-taking, the impression was gained that those in Group VM had much more to say and often had many other complaints in addition to the chief complaint that brought the patient to us for treatment. In Table III, 36 cases of each type, as indicated in Table II, findings of Frank N. Allan (1) who, after examining 300 cases with a chief complaint of weakness, fatigue, or weak spells, found physical disorders explained only 20 per cent, while nervous conditions were responsible in 80 per cent of the cases. Doubtless every physician practices with a larger or smaller percentage of patients with multiple complaints, the patient's chief complaint being the deciding factor as to which specialist he will consult.

While multiple complaints predominated in the non-skin reacting cases as a group, it seemed worthwhile to chart this data for individuals, and 20 con-

TABLE III

CHIEF COMPLAINT: PERENNIAL NASAL SYMPTOMS (72 CASES)

OTHER COMPLAINTS	Positive skin tests Allergic (36 cases)	Negative skin tests Vasomotor (36 cases)
Fatigue	• • •	• • • • • • • • • • • • • • • • • •
Nervousness	• • • • • •	• • • • • • • • • • • • • • • • • •
Headache	• •	• • • • • • • • • • •
Sleeplessness	• •	• • • • • • •
Chilliness	• • •	• • • •
Dreams		• • • •
Cries Easily	•	• •
Muscular Aches		• • • • • •
Dizziness		• •

are analyzed and the more common collateral complaints are listed. In the negative skin-test group (Group VM), fatigue, nervousness, headache, sleeplessness, and muscular aches were several times more frequent than in the skin-test positive group. Here again these deviations seem to indicate a basic difference in the nature of the two groups.

Ross (11) and Alvarez (2) have described most clearly the personality type that is associated with multiplicity of syndromes and symptoms, which are more and more being recognized and identified as psychosomatic illnesses, and are more and more being treated from the standpoint of the total individual, functioning as a unit, rather than by directing the treatment toward the symptoms of which the patient complains. Our Group VM patients are similar to those described by Alvarez except that many of his patients had gastrointestinal complaints and came to him because he was a noted gastroenterologist. Our patients manifesting complaints which simulated allergy came to us because we were known as allergists. Stokes (13), Lynch (8) and others have pointed out the great significance of emotional factors in various skin eruptions, especially atopic dermatitis. The frequency of fatigue in our Group VM patients re-emphasizes the secutive cases are contrasted with a similar number of Group A cases, the data being illustrated graphically in Table IV. Here the marked predominance of multiple complaints in individual cases having perennial nasal symptoms which simulate the true allergic syndrome, but fail to give positive skin tests, is evident. In occasional cases of true allergic rhinitis, we do encounter multiple complaints, and since the two conditions are common, it is to be expected that they will occasionally occur in the same individual, but it does not necessarily indicate that the two manifestations have any etiologic relationship to each other. We are in no position to state, since the evidence does not bear this out, that true allergy is caused by or is usually associated with psychogenic factors. There are individual cases wherein both conditions are present.

The data thus far given bears out what we had become increasingly aware of in our experience. In a previous paper (9) we set down certain clinical impressions regarding allergic patients without any statistical data. There seemed to be two main classes of patients, one readily understandable from the point of view of allergy, and the other which somehow did not fit into this group. This second class showed noticeable difference in incidence be-

tween men and women and at the same time seemed to have a much greater spread in the case history of many complaints, particularly fatigue, exhaustion, insomnia, and the like. As we learned more about psychologic factors in personality maladjustment, and for our own clarification of these factors, it became important that an estimation be made of a group of this second class of patients from the psychologic point of view. We did this then, as shown in Table V.

Since psychogenic factors in asthma have been mentioned by numerous authors, and since many of our own cases have been labeled "intrinsic asthma, cause not determined," 100 cases whose chief complaint was "year-round asthma" were classified according to our present attitudes in relation to the recognition of the maladjusted personality. All seasonal cases were excluded. In 21 per cent of the 100 asthmatics the cause could not be determined by physical examination, skin tests, or clinical trial. Personality maladjustment, however, was the common denominator in all. When the diagnoses in our "year-round asthma," seen from 1934 to 1944, 1129 in all, were tabulated (Table V), a close numerical agreement between the general distribution of these two groups could

TABLE IV

CHIEF COMPLAINT: PERENNIAL NASAL SYMPTOMS (40 CASES)

POSITIVE SKIN TESTS

Case No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Fatigue								•		•										
Nervousness						•														
Headache																				
Sleeplessness								•		•										
Chilliness										•							•			
Dreams																				
Cries Easily														•						
Muscular Aches																				
Dizziness																				

NEGATIVE SKIN TESTS

Case No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Fatigue	•	•	•		•	•		•		•							•	•	•	•
Nervousness	•	•	•	•	•			•		•	•						•	•		•
Headache														•		•	•	•	•	
Sleeplessness										•		•					•	•		•
Chilliness								•										•		
Dreams					•			•	•											
Cries Easily					•															
Muscular Aches	•		•			•				•										
Dizziness					•						•									

TABLE V

CLASSIFICATION OF PATIENTS COMPLAINING OF "YEAR AROUND ASTHMA"

	1934-1944		1945
	1129 Cases	Per Cent	100 Cases
Extrinsic: Dusts, animals, etc.	559	48.5	44
Recurring bronchitis	164	14.5	14
Fixed emphysema	75	6.6	11
Aspirin	32	2.8	2
Cardiac	13	1.1	6
Bronchiectasis (proven)	18	1.6	2
Sighing dyspnea	6		0
Tuberculosis	3		0
Tumors:		1.1	
Benign	1		0
Malignant	2		
Foreign body	1		0
"Cause not determined"	255	22.7	21 (Psychologically maladjusted)

be seen. Had we seen the 255 cases, diagnosed "cause not determined," now, and had we approached them from the same psychologic point of view as the 100 asthmatic cases seen in 1945, it is probable that the majority would give evidence of personality maladjustment.

Among the psychologic factors most evident in those people who fit into the multiple complaint group, and who also gave negative skin reactions, were all those elements which Curran's study (4) reveals as characteristic of psychologic maladjustment. For example, the negative emotion factor of hostility, especially to the home, was very great. The following is a typical example of this rather characteristic attitude which many of these people showed:

I've been raised by uh—a very Victorian type of person—my guardian is—and uh—she's I have a battle within myself in regard to her. . . . She's very possessive of me because, of course, I'm the only thing she has. But she also has those very, very Victorian ideas about life, which you just don't expect—people just don't do that. And since I've been going away to college, we've just clashed on so many silly things. You just can't imagine . . . she has such a—oh, how can I explain it—such a perverted idea about things that go on. For instance, if I go out with my boy friend, and if I don't tell her exactly where we went and what we did, then she'll walk around with a suspicious air, and I know what she's thinking, and she'll pick me, and pick me and pick me all day. . . .

Another example of the same feeling is the following:

And when I was thirteen, I went to learn my trade. My father who was a farmer told me I never would be a farmer —"you're sick all the time, so I'll give you a trade," and he did it. And the lady where I was working—my boss' wife—I was yellow and a kinda sickly boy—so she put me in the hospital. I was in the hospital for about two weeks. . . . . and it was just like somebody told me something when I saw my mother—black eyes, good-looking woman—and just like, it seemed at that minute, I had in my mind that when I grew up, she would always be my enemy—and she was. That's the reason I moved to this part of the country.

Besides this, these people gave indications of fears. The following would be typical of this reaction:

Well, I tell you—this thing about being sick. Ever since I've been a little girl I've had a terrible phobia about being ill—it isn't being sick that bothers me, but I get terribly frightened when I get sick.

Very often all of the factors of maladjustment went together, as in this statement:

I have had quite a lot to worry about, but it's been over a period of years—I mean [NEF (worry)]* which may have something to do with this. I don't know—maybe so. [Insight enshrouded in doubt.] Maybe you can tell me, I don't know. [NED (dependency)] But, I had a very unfortunate thing happen to me right after I finished school about ten or eleven years ago, and it's been a constant source of worry to me all the time. It's been something that I haven't been able to talk with anyone, you know, I mean it's something that I can't discuss with anyone, but uh (laughs) since you're the doctor, and (pause) maybe uh (pause) if you think that it might help me to uh—well, if it might help me in a physical way—to tell you about it—I'll tell you what it is. [NEF (guilt)]

(Patient tells what is preying on her mind.) Well, it's been an awful worry to me doctor, . . . I mean it just preys on my mind all the time, I mean worrying about it [NEF (worry)] and all these things just put together just about drive me crazy, and uh—it just keeps me in kind of a whirl all the time. [NEC (confusion)]

It bothers me all the time. Whether I'm working or whether I'm not working, it bothers me all the time. It's on my mind all the time. [NEF (anxiety)]

* These categories are from CURRAN, CHARLES A.: *Personality Factors in Counseling.*

It's the hardest thing in the world for me to tell him because I don't know how he would react, you see. [NEC (conflict)]

I've just—I've just harbored this thing so long, you know, and even my family doesn't know—the true circumstances under which it happened. It just happened, and I didn't want to discuss it, and I didn't discuss it, and I just tried to —I just kept it to myself, because I didn't want to discuss it.

One of the greatest factors that was consistently present in both Curran's study and our findings was a general state of conflict or confusion in which these people did not seem to know where they were going, had no clear-cut goals or plans, or were blocked in achieving certain goals that they did desire. They could not see any way out of the labyrinth of their own problems. This seemed to be the greatest source of their confusion. The following exemplifies this attitude:

The first time I had asthma, I was in another college, and I was very, very much upset about a fellow that I was very much interested in, and I thought I was carrying my cross very bravely and all. . . .

I had been all upset about this boy. It took me a whole summer to get it out of my system. I really felt pretty low about it. From all appearances he was getting serious about me, but he kept it very friendly, and I wanted it to be different. It was a very frustrating thing. We'd just spend hours and hours together, but whenever he would go on a date and take somebody to something very nice, he would take one of these two girls. Oh, I would have loved to have gone with him like this one girl friend.

So you see, it's something about that—my social situation that brings this whole thing on.

In the following excerpt, this state of confusion is described as a fog or haze:

Sometimes I feel hazy. I mean I've always felt that way at times—just more or less like I was in a fog. I don't understand exactly what it is. . . . It is the fogginess that bothers me more than anything else. . . . Well, I mean, I feel there is not much I can do. I mean I think about it but I don't feel like doing anything. I start wondering if there is anything I can do.

On the positive side, however, quite a number of these patients, as soon as they began to talk about themselves, showed insight into the possible psychogenic aspects of their illness and also began rather rapidly to make plans to do something about it. In other words, it seemed rather a relief to them that the psychologic aspects were made clear because it gave them a new means of approach to solving the illness as well as the psychologic problems. The following is a dawning insight when the person begins to think about causes from a psychologic point of view:

In fact, you know, if that clears up, I wouldn't even be troubled with my allergy—if I could, you know—well, it just might be that tension that I feel at home that has brought this on.

We noticed among many of these patients a rather honest willingness to face the problem and to begin to think about it psychologically, and at the same time a sense of satisfaction that they knew now where the solution was and just how much responsibility they themselves had for thinking it through. The following response indicates this:

Dr. M. said he had never heard of a case where dampness caused such a violent reaction. I think maybe that this physical trouble more or less set off a nervous condition and resulted in the extreme nervousness and this would explain the fact that I couldn't eat and I'd throw up and a couple days I could hardly talk last winter, and I was so nervous. It seems very logical to me, so I've been trying to analyze the condition. I can tie up a lot of things that happened in my environment with present day occurrences. In other words, although the condition has actually disappeared, things currently remind me of it, and the reaction seems to be just the same as it would be had the condition remained present.

T: I'd like you to feel very free to speak of yourself. I think the more free you feel in this relationship, the more good may possibly come of it.

P: Well, I realize that. Dr. M.—I think—was rather hesitant at first, because he didn't know how I would react, but I was in a way relieved when he told me that there might be some psychological things there. Although I guess a state of mind sometimes is pretty hard to change. Well, anyway, it goes back to home life—I guess many cases do. Uh—my parents never get along. I'm the oldest of si children—three brothers and two sisters. Well, it's ha l to find a logical beginning, I guess, but the—I always say this, I uh, I really hated to go home because I just didn't know what to expect. It was always arguing, and constant disagreement.

While we have not yet gathered all the data on the relationship of counseling success to both physical improvement and psychologic adjustment, we have seen that in those cases where adjustment does take place the patient feels that he is much better. The process of adjustment seems very simila to that shown in Curran's study. Patients go through a period of negative-emotion release in which they state various problems in a rather unconnected manner. This is followed by dawning insights as problems are slowly connected together and new solutions are planned. Finally, the plans are carried out and a new way of life is gradually formed which is much more satisfying for the patient and makes him more relaxed and secure. Insofar as the patient accepts and works through this kind of a psychologic process, we feel there is strong indication that he grows increasingly better physically in those cases where there are these multiple con-

plaint factors. We hope to report later on the success and failure of this psychologic approach, but thus far we can say that a sensitive type of case history which uses the nondirective counseling skill as a technic seems quite valuable in approaching these problems and in allowing the patient to make a broader and more complete expression, not only of the particular illness for which he comes, but of many other multiple complaints which he has and also of the possible psychologic factors of which he is aware.

Summarizing then, we may say, that our findings seem to show 1) that there is a distinction between the positive skin reaction group and the negative skin-reaction group as to sex and age—the positive skin-reaction group seem to be fairly well-balanced in an age distribution, whereas the negative skin-reaction group seem to be more women than men, especially in the middle-age levels. 2) The negative skin-reaction group, in a much greater degree, are also the multiple complaint group, expressing a variety of illnesses and complaints, whereas the positive skin-reaction group do not ordinarily have such a variety of complaints and respond more readily to treatment. 3) Upon analysis, the negative skin-reaction and multiple-complaint group indicate a strong content of factors characteristic of psychologic maladjustment. 4) When approached by the sensitive nondirective technic rather than abrupt questioning, the case histories seemed not only to reveal this psychologic data but also to produce a state of release and in many instances of successful adjustment psychologically and physically over a period of time. Later we hope to report more in detail on this last question.

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THE SOMATOPSYCHOLOGIC PROBLEM *

ROGER G. BARKER, PH.D.**

The interrelations of physique and behavior are of such great variety, and are so complex and difficult to study, that specialization in investigating them is necessary. In view of this it is desirable to survey broadly the field of psychic-somatic relations in order to discover if all promising problems are receiving attention. In this paper I should like to do this in connection with the problem of the relation between the peripheral physique and behavior. I should like to raise this question: What are the kinds of relations between the extracentral-neural physique and behavior, and are they all being studied in accordance with their probable significance? We shall not be concerned here with the central mechanisms of behavior, but only with the relations between behavior and such peripheral physical characteristics as size, stature, motor ability, orthopedic disability, sensory acuity, cosmetic defect, and health.

There are four kinds of relationship between this extracentral-neural physique and behavior, as follows:

Relation 1: Physique and behavior may be dynamically independent and statistically uncorrelated: *e. g.,* to my knowledge no relation has been discovered to exist between fingerprint pattern and behavior.

Relation 2: Physique and behavior may be dynamically independent within the individual but statistically correlated in massed data. Each may be the independent product of a common factor. Thus, although important executives are of larger size than common men, large size may not be a determinative factor in the achievements of executives; both may be due to the superior nutrition and social advantages provided by upper-class parents. Although tough, pigmented skin and squinting behavior are frequently found in the same persons, both may be independent products of the action of the sun and wind.

Relation 3: Physique may determine behavior. Physique may influence behavior by acting directly upon peripheral neuromuscular mechanisms. When the fingers are cold they become paralyzed and anesthetic; scar tissue may cause restricted joint action; excess blood sugar leads to diabetic coma. Furthermore, the behavioral effect of cold fingers will not be limited to anesthesia and paralysis; it will ramify in accordance with the unique meaning of finger action in the particular situation obtaining. It may lead to rubbing the hands with snow, to attempts to strike a match by holding it in the teeth, to going in the house. Restricted joint action or diabetic behavior-symptoms may require abandoning engineering as a vocation. In these latter cases we are dealing with the *psychologic* significance of physique in contrast with its physiologic significance in the first examples.

Physique may also influence behavior by serving as a social stimulus to the self and others. Physique has a basic significance as an indicator of the position of the individual in his own life career. A person viewing himself in the mirror, and finding evidence of illness or advancing age, may react in very far-reaching ways: by going to the doctor, by dyeing his hair, by having a "last fling." Physique also has a fundamental significance to the individual in terms of the cultural mores within which he lives, for physique is one of the important criteria upon which social distinctions are based. A person who lives in a culture where social distinctions are made upon the basis of age, sex, race, stature, beauty, or physical normality will behave, upon observing his own physique, in accordance with his evaluation of these criteria. Likewise, others will react to his physique by accepting or rejecting him in accordance with their evaluation of these physical criteria of social classification. Thus, a physically mature 14-year-old girl is more likely to want and to have the opportunity to attend the Senior Ball than a physically childish girl of the same age. Here we are concerned with the social-psychologic significance of physique.

Relation 4: Behavior may determine physique. Behavior may influence physique by directly determining muscle tonus, posture, glandular activity, and metabolic state. Secondary effects upon neural activity and, eventually, upon organic function and structure are well known. This is the important psychosomatic problem with which this society is primarily concerned.

Behavior may influence physique by determining conditions of growth and function over both short and long periods of time. The physique of a seden-

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** Clark University.

tary business executive will change if he becomes a cowboy.

Some of these relations between physique and behavior have been intensively studied. Studies of genetic, embryonic, and cultural sources of correlated but dynamically independent behavior and physique have been productive. Physiologic psychology is a well established discipline with a large literature. The new field of psychosomatic studies and the old one of the constitutional basis of temperament are both active at the present time. Many studies of the influence of behavioral conditions on physical growth and function have been made. It is in connection with the psychologic and social significance of physique that least has been done. It is true that certain specific problems within these fields have been intensively investigated, notably the social significance of race and sex. However, these have not often been placed in the larger setting of the general problem of the social psychology of physique. It is to this area of problems that I should like to direct your attention. For convenience I shall designate it the *somatopsychologic problem*.

There is a widespread assumption among laymen, social scientists, and psychiatrists that physique in its social-psychologic aspects, *i. e.*, in its somatopsychologic significance, is of great importance in the motivation of the individual. Among clinical psychologists and psychiatrists there is a great superstructure of theory based upon case studies and clinical experience which assumes that important sources of personal adjustment lie here. Such statements as the following abound in the literature of the social sciences, psychology and medicine:

> Mr. Greer is about 40 years old; . . . (as a young man) he did well in school. He is well liked and studious. He is extremely short and undersized. This seems to be one reason for his great drive to succeed and get things done. . . . Greer wants personal success, a not uncommon trait, especially for a person who is abnormally small.

Or take another example:

> Strong bodies, well formed and socially approved, predispose people (especially in youth) to develop extraverted, realistic, sociable traits; conversely, frail, malformed, or markedly atypical physiques tend . . . to produce introverted, intellectual, or autistic personalities.

Despite the wide acceptance of these views, relatively few systematic investigations of their correctness have been made. A recent survey* of the somatopsychologic literature revealed the following situation:

The behavior resultants of extreme deviations in size of stature have hardly been investigated at all. So far as we have been able to find, there has not been a single study of the adjustment of persons with short stature, and only one pioneering investigation of unusually tall persons. There have been a half-dozen studies with some bearing upon the somatopsychologic problems of obese children. Bruck's and Levy's work are pertinent here.

Orthopedic disabilities place otherwise normal individuals in very special situations so far as freedom of action is concerned. It would appear that here would be an excellent opportunity to study the effects of known social and psychologic pressures upon personality formation. As a matter of fact this opportunity has not been overlooked; approximately 25 studies report some data of relevance in this connection. Many of these studies are fragmentary and exploratory, but at least enough has been done to demonstrate the possibility of fruitful research. Landis and Bolles', and Kammener's work should be mentioned in this connection.

Sensory defects of hearing and vision have excited a great deal of interest, and much valuable work has been done. However, most of it has dealt with problems of diagnosis and special education, and relatively little attention has been paid to the psychologic resultants of blindness and deafness.

Cosmetic defects and disfigurements are of especial interest from the somatopsychologic point of view, but upon these there have been reported only a few scattered observations.

When it comes to the chronic diseases which are universally acknowledged to require basic alteration in mode of living, the situation is similar. The somatopsychologic problems of tuberculosis, rheumatism, and heart disease have aroused considerable interest, and some systematic research has resulted. In the large literature on the psychology of tuberculosis there are 19 reports that satisfy the unusual standard of scientific investigation and reporting. A good beginning has been made. In the case of both rheumatism and heart disease there are a half-dozen studies of somatopsychologic effects.

It requires no extensive scientific investigation to reveal the fact that acute illness always produces profound changes in the social-psychologic situation of the individual. It is well recognized that the doctor's approach to the patient, hospital organization, convalescent care, occupational therapy, reconditioning programs, and social services must be

* Barker, R. G., Wright, Beatrice A., and Gonick, Mollie R.: *Adjustment to Physical Handicap and Illness. A Survey of the Social Psychology of Physique and Disability.* New York, Social Science Research Council, Bulletin 55, 1946.

based upon the psychology of the ill person. The possibility for fundamental psychologic work here has been impressively pointed up by the pioneer work of Clothier, Deutch, Edelston, Levy, Beverly, Huschka and Ogden, Romano, and others. But these are only harbingers of what might be done. When one considers the use made of social, personnel, and clinical psychology by educational institutions, business organizations, governmental agencies, museums, and the Army and Navy, for example, one can see immense possibilities for similar, proven techniques in hospitals where personal and social problems are considerably increased.

So we can say that as yet the somatopsychologic field has been little more than prospected by research scientists. Yet this prospecting has clearly indicated that there is 'pay dirt' in this region. And there are a number of signs that a boom may be expected.

For one thing, as medical procedures improve, the somatopsychologic aspects of illness become relatively more important. Today the treatment of tuberculosis, diabetes, some cardiac ailments, and many other disease conditions is essentially a matter of teaching a way of living. And its success depends upon a proper understanding of the psychologic situation of such patients. Medical technics are useless in these cases without proper psychological technics. The idea that one can prescribe a way of life as one prescribes a medicine and expect it to be carried out dies hard.

Furthermore, as medical knowledge increases, medical practice becomes more and more a matter of treating the patient before he becomes ill. In a school with which I am acquainted, the best efforts of doctors, nurses, and teachers secured 40 per cent permission for pupils to receive a tuberculosis test. Here medical technics were ineffective in a high degree because of inadequate social psychologic technics. An expensive nutritional campaign in a district with poor nutritional standards was 2 per cent effective, *i.e.*, 2 per cent of the people who were reached made some desirable change in their diets. A different psychologic approach with no increased expense in a control community was 35 per cent effective.

I am not suggesting that we have the answers to the psychology of the sick person. I am only suggesting that technics are available for beginning to answer some of the questions in a scientific manner.

Research upon the social psychology of physically atypical persons, ranging all the way from persons with extreme stature to those with acute illness, is important for a number of reasons which are becoming widely recognized.

1. Such research should become an important source of information regarding some of the factors in personality formation and behavioral adjustment. Some of these individuals live for long periods of time under conditions of severe frustration, great conflict, extreme social rejection, profound insecurity, complete dependence, etc.—conditions which are presumed to be important factors in adjustment. Such cases consequently present an almost experimental approach to problems of personality formation.

2. The social and psychologic adjustment of physically atypical persons becomes a practical social problem as society more and more assumes responsibility for the welfare of its citizens. Already a number of professional groups are dedicated to the welfare of these people, yet they have little more to guide them than zeal and workaday experience.

3. Medical procedures, to be effective, increasingly require proper psychologic approaches to patients; this is imposible without increased understanding of the psychology of ill and physically atypical persons.

Research in this field is not easy. Adequate controls, in order to isolate the somatopsychologic effects of physique, are difficult to secure. That which has been done to date, however, abundantly proves that scientific research is fruitful. One of the approaches that appears to be especially rewarding may be used to illustrate this.

In 1883 Francis Galton published his famous "Inquiry into Human Faculty and Its Development." In this study he reports upon 13 pairs of like-sexed twins, one of whom in each pair was physically defective from illness or accident. For example, he quotes the father of one pair as follows:

"At birth they were exactly alike except that one was born with a bad varicose affection, the effect of which has been to prevent any violent exercise, such as dancing, running, and as she has grown older, to make her more serious and thoughtful." Galton concludes from his study of these cases that "the only circumstance (to which these people were subjected) capable of producing a marked effect on the character of adults is illness or some accident which causes physical inferiority. . . . It appears that the constitution is not so elastic as we are apt to think, but that an attack (of illness) leaves a permanent mark, easily measured by the present method of comparison."

Galton's data are not adequate in the light of present-day standards of scientific reporting. But his method is characteristically brilliant and far in advance of his day. In fact, a diligent search has failed to reveal any other data upon identical twins

in which one is physically disabled until 1930 when Newell described a pair of 14-year-old identical twins, one of whom was partially paralyzed at 2 years of age, probably by poliomyelitis. At 14 the disabled twin's right arm and leg were atrophied, weak and moderately rigid. The disabled twin is described as childish, nervous, unable to make friends, yet greatly desiring to do so, suspicious, and feeling inadequate in every way. Her sister, on the other hand, is said to be stable, popular, cheerful, truthful, self-confident, and able to make friends easily.

Jenkins, in 1935, described a pair of identical female twins, 10 years old, one of whom had cerebral palsy due to birth injury. The disabled twin exhibited choreo-athetoid movements, was weaker, had poorer muscle tone and a poorer posture than her sister; she was unable to compete with her sister in running and active physical play. The disabled twin is reported as being more shy, more quiet, more reserved, and more reticent than her sister, and at the same time more eager for social approval.

Bradway, in 1937, reports some observations of 5-year-old identical female twins, one of whom was disabled from cerebral palsy at birth. The spastic twin had the motor development of a 6-months infant. According to Bradway's report, the disabled twin's personality was more pleasing than her sister's and her emotional reactions were entirely normal. She was very cooperative and well adjusted socially. Her physically normal sister displayed a mischievous, impish disposition; she was negativistic and exhibitionistic.

I have collected some data upon a pair of identical female twins, 16 years old at the time observations were begun. One of these twins has osteomyelitis, which began at 9 years of age. Since that time she has spent a total of over two years in hospitals and has had numerous operations because of recurrent acute phases. Her left knee is ankylosed and her left leg is two inches shorter than her right.

The parents report that until the time of her illness, the disabled twin was somewhat more rugged and energetic than the nondisabled twin. She was stronger and heavier at birth. She more frequently was the one who took the initiative during their childhood years. At the age of 16, after seven years of disability, the pattern of sibling relations has changed. On the basis of observations by a number of independent observers in a variety of situations, from the results of Rorschach and Thematic Apperception tests, and from clinical interviews, the following picture is well established.

The disabled twin is:

1. Less mature socially and emotionally;
2. More introversive, passive and subservient;
3. More conscientious in social situations, and more sensitive to the motives of others.

Here are some concrete instances of these general characteristics.

1. *Difference in social and emotional maturity.* The normal twin, on one occasion, crawled out the window to meet a forbidden boy friend; the disabled twin has engaged in no similar behavior either in reality or phantasy so far as can be determined.

The twins' mother finds she cannot entrust the disabled twin with household responsibilities well within her physical ability. She can and does do this with the normal twin.

2. *Difference in introversiveness, passivity, and subservience.*

In conversation with the twins, all observers agree that they inevitably converse via the nondisabled twin. In sample conversations, the normal twin has been found to talk three times as much as the disabled twin.

The Rorschach suggests that the disabled twin fears contact with outside world.

3. *Differences in conscientiousness and sensitivity.* Although the twins have identical Binet mental ages, the disabled twin works regularly and gets good grades in school, while her sister studies intermittently and barely passes.

When they were guests at my house, the disabled twin was up in ample time for breakfast while her sister did not put in an appearance until every one else had finished. The disabled twin did more than was necessary to be a gracious guest.

Perhaps these results from four pairs of identical twins, differing in physique because of accident or disease, are enough to indicate the possibilities of further research. It is clear that care in the elimination of central nervous lesions, comparison with physically comparable control twins, and adequate test and observational data are required. Furthermore, it is obvious that the mere reporting of behavioral differences does not answer the question raised. Much more information upon the concrete social situations of the twins, particularly within the family, is required. Why, for instance, does the most seriously disabled twin in this series appear to be the best adjusted in comparison with her sibling? We suspect that the answer lies in the psychologic situation existing within the family. This is something to be investigated.

With all their shortcomings, it is my impression that these four meager reports provide more insight into somatopsychologic effects of orthopedic disability than more numerous and extensive investigations and case reports. Here is a source of information which should by no means be overlooked, and it is my hope that by bringing this matter to the attention of this Society we will see a great increase in the number of such reports.

While psychosomatic factors in the etiology of disease are of paramount importance, I would suggest that the somatopsychologic effects of illness and disability have a fundamental psychologic and medical significance which in the past has been too frequently overlooked as a field for research.

CAMPTOCORMIA, OR THE FUNCTIONAL BENT BACK *

SAMUEL A. SANDLER, M.D.

In all of medicine there is probably no more objective manifestation of the relationship between the psyche and the soma than that manifested by cases of camptocormia, or the functional bent back.

A competent orthopedist, Whitman (8), defines camptocormia as "A condition in which the trunk is inclined forward without lateral distortion. The symptoms, aside from an inability to stand erect, are weakness and pain. The deformity may be marked by injury, shell shock and the like."

As far back as the First World War, a careful observer, Hurst (4) of the British Army, made the following comment:

> The soldier who walks slowly and painfully with the aid of two sticks, bending far forward, his arms and legs often shaking in the effort for all the world like the stage octogenarian, is becoming more and more a common sight. Though a large literature has grown up around him in France, it is a curious fact that he has not yet formed the subject of a paper in English. Considerable experience of this condition since I saw my first case, has convinced me that the bent back of soldiers, however variable its etiology, in its pathology is always hysterical in nature.

While in the military service we were fortunately able to follow a series of cases for a number of months under more or less controlled conditions, which were in some respects analogous to a laboratory situation and which are not particularly available in civilian life.

Most orthopedists, neurologists, and general practitioners have seen this type of case, either in their office or in the compensation courts, with a resulting feeling of frustration or possible annoyance.

In the beginning of the 20th century, when railroad cars were wooden structures and railroad transportation was not at its present efficient state, there were many railroad accidents with frequent concomitant resulting cases of what used to be called "the railroad spine." Many observers have noted that, although these cases were recalcitrant to treatment, usually after a financial settlement there was almost immediate improvement or cure.

We have reported a series of 19 cases in the July, 1945, *War Medicine* (7) and have observed almost 20 others. While some of these cases were precipitated by trivial trauma, others had no history of trauma at all. Some of these cases first presented themselves with other symptoms which cleared up and then were followed later by symptoms of pain, deformity, and limitation of motion in the back. All of these patients complained of persistent back pains. The back appeared deformed and they all assumed an anthropoid posture. They all moved slowly and carefully, and resisted any passive movements.

Our concept of a soldier has always been a manly, virile, vigorous individual, and so it was a grotesque and bizarre sight to walk through an Army camp and see a soldier with camptocormia. Instead of a man in the correct position of the soldier, with the body erect, chest lifted, shoulders square, and arms hanging straight down without stiffness along the seams of the trousers, one sees a person whose trunk is bent in anterior flexion at an angle of from 30 to over 70 degrees, sometimes with the trunk and head parallel with the ground and the arms swinging in an anthropoid fashion while walking. Although the appearance of these men seems to suggest severe muscular or bony diseases, yet in every instance they were cleared by the orthopedic department as being free from any organic disease.

My interest was aroused when on several occasions I witnessed explosive outbursts of hostility and aggression exhibited by men of this particular type. The effect was startling because, on the surface, these soldiers appeared to be affable and genial, but further investigation revealed that this was only superficial and that underneath these men were tremendously resentful and hostile—in some cases to the point of paranoic behavior.

It was our opinion that all of these individuals had a neurotic personality, and since Freud has pointed out, many years ago, that a neurosis represents a subconscious conflict wherein an individual finds himself in an intolerable situation, it is then readily understandable that the camptocormic individual found himself in this category. Camptocormia offered an effective escape from the trauma and dangers of war and separation from the family circle because of war conditions. It is also hardly necessary to point out that under civilian conditions the neurotic individual with a functional bent back, as well as the soldier in a military situation, makes great demands on the sympathies of the observer because of his helpless appearance. His bent back speaks an organ language, as if the back were to

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say, "For goodness sake, don't you see that I am crippled; that I am ruined? That I can't function properly? A man who is as injured, or as sick as I am, surely can't go to the front to fight the enemy! I need special consideration and attention. I need to go back home and recover my health."

From a therapeutic standpoint, camptocormia is a very difficult problem. Jones and Lovett (5) point out that:

> With regard to back injuries in general there is one cardinal point to be remembered. An injury of the back may be attended by more serious, widespread and demoralizing symptoms than occurs in the injury of any other joint. A trauma to the knee is followed by moderate pain, effusion and localized discomfort. A similar injury to the back is often followed by great pain, rapidly appearing stiffness and a condition wholly out of proportion to what one would expect from a simple joint injury. Pain is often complained of as intolerable and its distribution erratic. The symptom complex is often obscure and will tax the skill and steadiness of the most experienced surgeon. These cases figure largely in lawsuits and one has only to listen to the medical testimony given in regard to them to realize how little this condition is understood by the average expert.

As you will note, we in the Military Medical Service had our difficulties with this type of case.

Case 1: This patient, a 34-year-old white soldier, was inducted into the armed forces on October 21, 1943. He had completed elementary school and three years of high school, and before induction was a musician.

I first saw the soldier on February 9, 1944, at which time he said that the trouble with his back began in 1927. He added: "I have been bent over many times since then. Every time I lift something heavy or strain myself it happens." It began in 1927 when the soldier and his father tried to push an automobile. "I fell on my face and hurt my back." He had assumed the camptocormia position on four other occasions prior to induction. "I always worked for my dad in the coal mines and never for anyone else." The last three attacks occurred as follows: once while with his wife, once while with his father, without any precipitating events, and once while with a friend while helping him fix a tire.

The soldier has been married thirteen years and has no children. He said that he had sexual relations about once in every three months.

His father also had trouble with his back. In discussing the father, the patient said: "He is as old as President Roosevelt. He gets backaches all the time, too. He takes treatments for his back." The father has the same condition "but not as bad as mine. It hit him all at once." He implied that his father drank a great deal but said: "He has been good to me. He don't get mad right away, but when he does—look out! My dad gave us everything we wanted, but was pretty strict with all of us. He saw I couldn't make a living for myself, but he did not mind helping support me. I always stayed with him and never separated."

To a question, the soldier replied that his body would always assume the same degree of forward flexion, with the trunk bent to about a 65-degree angle. The last episode had occurred in 1938. "I was walking up the street with my wife, and it hit me all at once." He was in a camptocormia position for about seven months. Another episode occurred in 1934: "I was helping a friend fix a tire on his car—then it hit me, and I couldn't straighten up. I remember like it was today—they carried me in the house." He said he had an operation on his back at one time and the first episode of camptocormia occurred about one and one-half years after that event. He could not recall what happened, but was in bed for three months. There was another occurrence about three years later: "All of a sudden a pain hit me when I lifted something." He remained bent over for five months.

Case 2: This 29-year-old Negro soldier was inducted into the military service on April 18, 1944. He had completed the fifth grade of elementary school, and prior to induction was doing cleaning and pressing work.

I first saw the soldier on August 28, 1944, when he stated that after spinal puncture in April, 1944, he began to suffer with pains in the back. "It started as a cramp and finally drawed up so I couldn't straighten up. When I got out on the training field my back began to draw more and began to bend in June, 1944." He said that before induction he was moody: "I used to cry, sing, and get lonesome." He used to have dreams "that the world was coming to an end, that the trees were falling and that the wind and smoke were blowing hard. I was coming to a fence corner, and I was trapped, and I was trying to get out of the house."

In discussing his family situation, he related: "I never saw my mother. I always felt close to my father."

The soldier was hopitalized and discharged. It is interesting to note that the company commander reported: "No amount of prompting or suggesting has been sufficient to make the soldier stand erect. Obviously in this condition he cannot drill, nor can he make any lectures or other forms of instruction. The soldier has been observed while sleeping or while lying down and apparently can recline at full length; however, he has never stood erect since coming to this company."

When discussing his sexual relations, the soldier stated: "My wife left me for a fellow named 'Snuff' after we were married two years. She liked to drink, and I didn't. Lots of nights she would lay up and beg me to have intercourse, and I said 'no.' I got up one time, and that was enough for me. I guess I wasn't hot natured." There was one child. His wife claimed that it was his, but he doubted it.

Case 3: This 24-year-old Negro soldier was inducted into the Army on May 31, 1944. He had completed the seventh grade of elementary school, and before induction was a worker in a tobacco factory.

When I first saw him, on August 29, 1944, he complained: "When I was 14, I had drawing meningitis—where it draws your head between your legs, and the doctor said it settled on my brain." He stated: "I have spells at night with my head, and I go out of my mind. It feels like the pain is going around in a circle. What bothers me is what I learn today I can't keep in my mind for tomorrow. Everything seems like it vanishes away, and I can't remember nothing."

The soldier's father died of cerebrospinal syphilis after being committed to the North Carolina State (Mental) Hospital because he had attempted to shoot his family.

It is to be noted that this soldier was first seen in this office on August 15, 1944 (by another medical officer), at which time his back was straight; and when seen two weeks later the picture had changed and his back was bent, showing signs of camptocormia.

Case 4: This 26-year-old white soldier was inducted into the armed forces on April 19, 1943. He stated that in civilian life he had been employed as a salesman of automobile supplies.

I first saw the soldier on November 26, 1943, at which time he complained (in a loud, hostile, irritable manner): "I was ordered to pick up heavy logs by an officer last October, and for that reason I injured my back, because it was hurting me for seven years. I don't have any pep. I can't straighten my back. My legs don't carry me. I walk like an old man of 50. I have a pain and ache, concentrated in the base of my spine." He stated that he began to have trouble with his back seven years ago, when he slipped and fell while carrying a ladder. During black-outs he becomes frightened and hides underneath the bed.

In discussing his condition, he said that he felt under tension all the time and associated this tension with the lack of sexual desire. He dreaded the thought of his wife's coming to visit him in camp and said that there were no marital sexual relations. It disturbed him lest his wife feel that he was unfaithful to her. This was his second wife. In discussing his first wife, he related: "She did not want me around her. She kicked me in the back and threw me out of bed. She called me a rotten bum. After she kicked me out of bed I started to have trouble with my back." Under the influence of sodium amytal, the soldier made the following remarks concerning his first wife: "She wanted my money. She would say I was not any good the way a man should be. That's pretty hard to take." In speaking about his second wife he remarked: "When you marry a woman that has been married before, you are a little skeptical about her. Even though she says she thinks the world of you (and I know she does) I have a feeling someone is trying to force his attention on her. It is driving me crazy. The very thought of her drives me crazy. She says she is true as any wife could be. But after my first wife I don't know —you know how women are—it is only human nature."

The question of homosexuality was raised, and the soldier replied: "Sometimes I would rather have that than go through this. I thought they were going to stick a stethoscope down my throat here in the hospital. When I was 7 years old, a man made me have sex relationship. I will never forget it. When I saw the stethoscope, it made me feel that I would choke on it."

It is interesting to note that the soldier, although impotent, calls his wife over the long distance telephone every night to reassure himself that she is not pregnant. He added that he became embarrassed because she made him feel that she wanted a baby very much, and his inability to father a child humiliated him, as he felt that if he could not accomplish this function his wife would leave him.

As previously stated, nearly all of these soldiers were, on the surface, polite, and showed unctuous friendliness. They were insistent in the initial examination that they had no personal problems or conflict in their mental or emotional life. They protested that they were not worried about their induction into the Army or their status. However, when the training began and the pressure increased, they were unable to adjust to the military situation. They would frequently insist that the commissioned and noncommissioned officers were making unjust demands on them and that no one understood them or was willing to cooperate.

When resistance was encountered in the psychotherapy interviews and conferences, these soldiers

would frequently raise their voices and make threatening remarks. This conduct was pronounced by comparison with that of other neurotic groups that were handled by our unit. In one case a soldier actually tried to attack his basic training corporal with a fork. During psychotherapy, although most of these men verbalized their hostility, some showed it by overt behavior, such as clenched fists and facial grimaces.

COMMENT

It is significant that out of the 19 reported cases of camptocormia, in the 10 cases in which the father's medical histories were obtainable, 2 of the fathers had a definite history of camptocormia and others had had arthritis or other symptoms referable to the back. One soldier stated that his father's back had been "ailing him" since he had received an injury in World War I. The soldier was overidentifying with the father's illness and military experience.

In the entire series there were 3 cases in which the mothers complained of trouble with the back, and, interestingly, the mothers in these cases were not only the mothers but also assumed the masculine role since one father was killed when the soldier was an infant, one died when the enlisted man was 5 years old and the third father was shot and killed by a close relative when the soldier was 3.

The fathers and the father-substitutes were held in great esteem, and the men with camptocormia tried to pattern themselves after them. Although the father was greatly admired and loved, there were strong ambivalent reactions. One soldier stated: "He is a Prince. He is a strong man. I am the weakling and the black sheep." Another described the father as follows: "He is a fine fellow all the way through. He is made of steel. He is quite a guy." One soldier, who had seen his father only once in his lifetime, commented: "He was swell." Even though the father showed some strictness and severity—handling his son with sternness—there was still much love on the part of the soldier for the father. The basic characteristic indicated was that he would rather be punished by the father than neglected by him. This was evidenced in the statement of one soldier, who remarked that his father gave him many whippings: "He would use a broomstick to hit you over the head, but we got along good together. What he's got I got, and what I got he's got."

One soldier, whose father's conduct was cruel, still adored his father and spoke of him in an affectionate vein, stating: "I love him heaps." Yet these same soldiers seemed to have difficulty repressing their hostility toward their own fathers, and this ambivalent feeling of hostility toward the father was projected against Army officers and others who were in authority; there was much conscious and unconscious hatred directed against the military service.

Despite intensive psychotherapy during the period that the soldiers were undergoing their training routine, it was mystifying why only one man in the entire series of 19 became well enough to return to full military duty. I was rather nonplussed because my colleagues and I seemed to be making absolutely no progress, and because in a paper by Lt. Col. Percy G. Hamlin (3), it was pointed out that in 2 patients he had succeeded in removing symptoms rapidly by psychotherapy alone. Although my patients did not seem to get worse, they certainly did not improve. It was therefore a matter of some amazement to observe that after working for a period with some of them—and making no progress—when we began to admit them in the hospital for discharge, we could see a remarkable change in these men. They improved within the first twenty-four hours, without any consideration order than that of being admitted to the hospital. Within a week most of these soldiers had straightened their backs and lost practically all of their symptoms. This processing seemed to be "The Cure." This situation was rather embarrassing to our unit because some officers and fellow soldiers developed the unwarranted idea that these men with camptocormia were all malingerers.

It is interesting to note in retrospect that removing these men from overseas shipment, eliminating them from danger of violent death in combat or the possibility of destruction during overseas crossing was the "elixir" that accomplished the apparent cure. It seemed that no amount of skilled and concentrated psychotherapy was of any avail as long as these men were faced with present or remote danger to themselves. This point is illustrated by the following remarks which are quoted from Emanuel Miller's *The Neuroses in War* (6):

> Private C. M., aged 32 was near a shell-burst a few days after going up the line. He was blown up and, when he got up, he was fixed in the attitude called Camptocormia. Early suggestion produced some improvement but there were rapid relapses and, when seen in 1920, after 2½ years of Camptocormia, he had a striking stoical attitude and stated he had never once trembled or felt fear. He was quite sure his back was dislocated. With mild explanation and persuasion he recovered a normal attitude and gait, but reverted to incontinence, which had existed in late childhood. In this case, removal of the primitive, protective, instinctual response opened a new line of regression to an infantile type of response. The war attitude was specific to the stimulus of the

time, *i.e.*, 'Duck when you're in danger.' After a hysterical symptom lasting years had been removed, an infantile pattern took its place.

From such examples we can conclude that there can be marked off clinically a group of hysterical phenomena which differs in mode of onset and in psychopathological depth from other forms to be considered. That is to say, there is a type which shows a tendency to disassociation, closely allied to the reflex protective movements which are found within the range of normal behavior in everyday life. Such conditions are physiologically similar to the defensive immobilization of a limb following accidents. For example, when watching the traffic in a busy thoroughfare, one can notice, with the sudden loud backfire of a car, the sudden immobilization of some of the pedestrians in petrified attitudes lasting a second or two. As the pedestrians have no need to maintain these postures of startled and protective immobility, the state passes away. In war, with the longer duration of the danger situation, there is a need for continued protection and so the defensive attitude persists. Hysterical disorders of this type can be marked off as a class characteristic of neurosis in wartime.

Many histories can be given of men who developed their hysterical reactions after periods of prolonged strain, exhaustion and anxiety. In some cases the powerful ethical valuations of the soldier dictated to him a formula of behavior, and he had carried on cheerfully with no premonitions of a breakdown until a dramatic experience occurred—a shell-burst, a collapsing trench, a sudden horrific scene of mutilation and death. Subsequent psychotherapy laid bare the mechanism of his self-control, in which ethical considerations masked the underlying state of emotional tension. Most soldiers, however, readily admitted the increasing intolerable situations that they had been forced to face; the period before the appearance of the symptom was therefore a time of emotional stress in which the need to escape became more and more imperative.

Although this case report is an excellent recital and description, we feel that it is too mechanistic and does not develop the deeper psychologic implications.

The only man in my series who improved to the point of restoration to full duty showed some striking contrast to the others. The soldier was 28, white, and single. He had been in the Army twenty-two months and had injured his back on the obstacle course a month after induction. He had had camptocormia symptoms five weeks when I saw him. This soldier stated, after a number of interviews, that he had something on his mind that had preoccupied him for a long time, which he had not been able to share with anyone. Finally he said: "I knocked up a girl four and one-half years ago, and when she was six months pregnant I took her to an abortionist and she nearly died. It is something I can't shake off. I always have a feeling that somebody is after me. When I go to the latrine at night I get cold and feel that somebody is following me. Last night a fellow tapped me while I was urinating. My blood seemed to run cold. If I am restless at night, I think about her." The soldier was engaged to this girl, but apparently he had a tendency to keep postponing the marriage. He explained it in this way: "I don't miss her a lot, and it seems to be more an obsession." He was so preoccupied with this problem that he was reprimanded three times in one week by officers for not saluting. Shortly after the abortion, in February, 1940, the soldier was so troubled and disturbed that he became involved in an automobile wreck. He stated that he had frequent nightmares and sees his fiancée "standing in front of me and looking at me. This girl throws it up to me and accuses me of taking the child's life, but she wanted it that way, too."

This soldier had feelings of great guilt because, as he stated, "I have taken a life. It is something you can't run away from. From my conversations with you about these things I thought if I told you it would help."

The soldier had many difficulties with his fiancée over their situation and added: "The girl insisted at induction that I get out of the Army to take care of her, but I don't think any woman comes first—if the war isn't won, there won't be any women."

The soldier wanted to know if this incident could "drive me crazy." Since that time he had very little sexual relations with women because "even if I get stiff, I can't do anything."

In discussing his feelings of guilt and his need for punishment for participating in this abortion, together with his fantasied desertion of his fiancée, the therapeutist gave him strong reassurance and insight, with the result that the soldier's symptoms of pain in the lumbar area and associated bent trunk and head disappeared.

It is interesting to note that in one of the two cases Lt. Col. Percy G. Hamlin (3) reported there was also a very close association between the patient and his father, which was manifested in the following interesting way: The soldier was a clerk in the father's grocery store before induction. While working for the father he injured his back when he fell carrying a 100-pound sack of potatoes. He was in bed for six weeks following this accident. Later he apparently recovered and entered the service. In May, 1941, two months after induction, he was admitted to the station hospital after an alleged injury to his back while carrying a sack of potatoes, in almost the exact manner in which his first injury occurred. This was almost an exact repetition in the Army of the situation that existed when the soldier first became ill, while working with his father.

In one-third of the cases the soldier was compelled to work during early childhood in order to assist the father with the support of the family because of the father's "back condition." These victims of camptocormia would pattern themselves after the father or the father surrogates. For instance, one soldier became an embalmer because the best friend of his father was an embalmer. Another soldier's father was a deacon; so he became a deacon and superintendent of a Sunday School, thus identifying himself with his father.

There was great resentment and irritation toward authority, stemming from the ambivalent relationship to the father. These soldiers frequently became guilty of minor disciplinary infractions, as if to involve themselves with authority so that they could satisfy their masochistic need for punishment from the father-substitutes as they did with their own father. These men all expressed at one time or another, consciously or unconsciously, that they were the lowliest of the low, that they were unworthy and the doormats of the male species, that they were the most inferior of the inferior. It was as if they were reflecting their own conscious and unconscious need for degradation when they let their head and trunk gravitate toward the earth's surface.

The negative attitude of the men with camptocormia toward the mother was in sharp contrast to the affection for the father. Under the influence of sodium amytal one soldier, in discussing his mother, remarked, "I wouldn't give you two cents for her. She treats you like dirt under her feet." Another soldier disparaged his mother's physical appearance, describing her by saying, "She is short and wide." In over half the cases the soldiers referred to their mothers in the derogatory sense as being both nervous and excitable. In another case the soldier showed his defiance of his mother by the statement: "It is up to me to stand erect and show my mother that I am a man." (Note the unconscious use of the word "erect" associated with his own lack of potentia.) Generally speaking, "A man who feels low generally has a low manhood."

An outstanding observation in this study was the difficult domestic and sexual situations of these soldiers. It is interesting that 17 of the 19 soldiers were married, and 8 of the 17 married soldiers had severe marital disturbances. One soldier had been married three times; 3 had been married twice; 2 were divorced; 1 was contemplating divorce; and 1 had been separated from his wife for many years. Slightly more than two-thirds of the 17 married men had no children. In my opinion, this was due not to environmental or sociologic factors, such as birth control, education, and sickness, but almost entirely to emotional and psychogenic factors. Coming from large families, these men would be exposed to unresolved sibling rivalry. Being largely among the eldest, they not only were "dethroned" by the children that followed but had to share parental affection with them. Although they came from families in which economic want existed, this situation would reenforce only their own emotional insecurity.

The marital and sexual relationships of these soldiers were generally poor. In 3 cases the wives left their husbands a year after marriage. In nearly every case there was impotentia and sexual maladjustment. In every case the sexual disturbances were either preceded by or concomitant with the trouble with the back and the camptocormia was the prevailing excuse for their impotentia.

It was both instructive and interesting to observe how these soldiers reacted to their sexual difficulties. One man spoke of the sexual act as a "sacrifice and habit forming." Three of these impotent men married women who had borne children out of wedlock, and one soldier married a divorced woman with legitimate children. Another soldier had been married nine months when his wife started running around with other men because he could not satisfy her sexually. This marriage ended in a divorce shortly afterward. Some time later this soldier lived with another woman, and after the fifth year of this arrangement she demanded marriage. Immediately after the legalization of this union, the soldier began to have signs of camptocormia. In this case the camptocormia persisted for over four years. When this soldier was questioned about his marital situation, he stated that for him marriage symbolized a "trap."

Another soldier spoke of his first marriage as "seven years of hell," stating that his wife had physically kicked him out of bed because of his impotence. The soldier married again and was extremely jealous (or pretended to be) of his second wife. Although sexually impotent, he nevertheless frequently called her on the long distance telephone to ask if she were pregnant. When I questioned him as to why he persisted in this conduct, he expressed the fear that "if I don't get her pregnant she will leave me."

Another soldier stated that he had not had any sex desire for seven years but "it don't trouble me: it is because my back is paining me." He admitted, however, that when his back was not bent he had had intercourse infrequently, not oftener than once in three months.

A number of these men with camptocormia seemed to have married motherly women who were content just to work for them and look after their physical comforts.

One interesting attitude was expressed by a soldier, who stated: "What can a man in my condition do? It is all that I can do to make the sacrifice." This was his method of describing his sex attitude—as a "necessary evil." In this particular case his wife left him a year after marriage, saying "You are wasting my time."

Under the influence of sodium amytal, another soldier stated: "I have no more desire for a woman than that plank of wood. A man likes intercourse once in a while, but I am not a hog. A man can do without it."

In 2 cases the camptocormia coincided with the first year of unhappy marriage.

In 15 of the 19 cases the symptoms referable to the back were of more than five years' duration, and in 6 of these 15 cases they were of more than seventeen years' duration.

In addition to these symptoms, in every case there were associated neurotic symptoms, such as insomnia, urinary frequency, enuresis, and gastric and cardiac symptoms. Two of the men had been sleepwalkers prior to the development of the camptocormia syndrome. All these men had previously been reported by the medical, surgical, genitourinary, and orthopedic departments to be clear of organic disease. Six of these soldiers were treated for syphilis.

It is interesting to note that in 6 instances the men definitely attributed the onset of the trouble with the back to spinal taps performed by medical officers. It is my belief that the spinal needle acted as a traumatic agent on these neurotic soldiers, inducing castration fantasies, thus accounting for their subsequent impotence. Another factor to be considered is the possible activation of their latent homosexuality by the insertion of the needle, which symbolizes the phallus. They verbalized their reactions as follows:

The first soldier remarked; "I remember in taking the needle from my spine he took something away besides the fluid. It seems like he took my strength."

A second soldier stated; "The needle in my back weakened me. It felt like something boring inside where the needle was."

A third soldier said; "I ain't never going to let anybody put a needle in me again."

A fourth soldier verbalized his feelings as follows; "The last spinal tap made me weak and drawed out some stuff."

A fifth soldier said (under the influence of sodium amytal); "That big stiff needle—it touches your very soul. You are no good any more."

A sixth soldier stated that after the injection; "I began to suffer with my back. It started as a cramp, a steady one; it finally drawed, and I couldn't straighten up."

It is interesting to note that more than half of these men were referred to our unit with symptoms of camptocormia during their first week of basic training, or before they even actually began to engage in any strenuous physical activity.

These soldiers were traumatized in their early development. In 9 of the 19 cases there was either death or separation of the parents in the soldier's early childhood.

Since reporting the above cases I had occasion to examine and treat about 1000 men in the Pacific during the Okinawa campaign. In this group of patients there were 3 cases of camptocormia. In no instance was the back bent to the marked degree that was present when the patients were observed in the training camp at Camp Lee, Virginia. These camptocormia cases overseas, in addition to their back symptoms, were accompanied by other symptoms. It is my feeling that cases overseas were overlooked because of the mild degree of bending of the trunk. It is to be remembered that most of these cases were detected and eliminated by the neuropsychiatrist in the States before embarkation for overseas. I wish to emphasize this point because some men who served in the First World War stated that they had never seen this type of case in France and it is my feeling that the reason for this was similar to the reason given above, that they probably were eliminated in the training camps of the United States as unfit overseas material.

It is my impression that many cases of camptocormia go unrecognized in civilian life because there is not the urgent conscious or unconscious need to escape from danger manifested in wartime by the hysterical soldier who is destined to do combat duty. For the soldier in wartime, "the end of the trail" leads to possible injury or death and the need to escape from danger is greater, therefore the need for extreme objective manifestation of his emotional difficulties. In civilian life, because of less urgency and danger, there is a diminished manifestation of these symptoms, but most experienced medical men in industrial and traumatic work have seen this type of case.

Huddleston, in his work on *Accidents, Neuroses and Compensation Cases,* gives the following case:

A ship's engineer, aged 23, single, white, American, while descending a ladder slipped and fell a short distance, alight-

ing in a sitting position. He did not have symptoms of spinal concussion (paralyses, anesthesias, incontinence), but did complain of coccygeal pain and tenderness. Marked peculiarities in gait appeared some days later, during the hospitalization that was given him after his ship made port, and became worse as examination after examination showed nothing structurally abnormal, except a slight coccygeal dislocation for which he was given adequate treatment. He did not return to work. Seven weeks after injury he was walking with the entire spine flexed and rotated, legs flexed at hips and knees, feet on a wide base and with a tendency to pes equinus, progression slow and labored with the aid of a heavy stick. At the same time the shoulders were humped over, and the head was thrown forward with each step.

CONCLUSIONS

Camptocormia is a hysterical phenomenon seen occasionally in civilian life and during wartime in certain neurotically ill soldiers:

1. It is manifested by pain in the lumbar area and by a bent trunk, which may or may not be precipitated by trauma and is of functional origin.

2. In this syndrome there is not only the adoration of the father but, in addition, there is a suppressed ambivalent irritability and hostility against the father. There is present a strong overidentification with the father, who has also generally had trouble with his back. In the 3 cases in this series in which the mother had serious trouble with the back it is remarkable that the fathers of these patients were either killed or died before the soldiers were 5 years of age; therefore, the mother assumed not only her own role but also the masculine role of the absent father. This gives rise to speculation regarding the effect of the death or absence of the father on the psychosexual development of these men.

3. The onset of this back-bending phenomena is concomitant or preceded by impotentia, which I feel is rather general in camptocormia, and is probably indicative of the soldier's latent homosexuality and castration anxiety.

4. The ambivalent feeling toward the father reflects itself toward authority in the military situation, with resulting projection of resentment on commissioned and noncommissioned officers. The military situation is the source of constant threat and danger to the ego, which continually strives for its safety and protection. When the pressure becomes too great, the ego wilts and the symptoms of camptocormia develop. I have observed that when these soldiers find asylum from the rigors and dangers of war by admission to an Army hospital, with the knowledge of subsequent discharge from the service, this is sufficient to produce a disappearance of symptoms.

5. This condition of camptocormia not only is a phenomenon in military life but is occasionally seen in civilian life following industrial and other types of accidents; but it is frequently unrecognized.

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CLINICAL NOTES

PSYCHOLOGIC ASPECTS OF THE MEDICAL MANAGEMENT OF DIABETES IN CHILDREN *

HILDE BRUCH, M.D., AND IRMA HEWLETT, M.S.**

Diabetes mellitus is one of the organic disorders in which the importance of emotional factors has been recognized for a long time. The discovery of the physiological mechanism, particularly the discovery of insulin, for a while over-shadowed the interest in the emotional aspects of the disease. During the past decade, systematic inquiries into the psychophysiologic interrelationship in adult diabetic cases have been carried out by a number of investigators. No uniform personality picture has been described but there has been emphasis upon the importance of long-continued emotional strain during the period before diabetes became manifest, and attention has been called to the exacerbation of the clinical symptoms at times of psychological stress.

Diabetes in childhood is usually a more severe disorder than in adulthood. It develops in a brief period of time; in the preinsulin era it led within a short period to death. Under present day medical management, with judicious use of diet and insulin and its compounds, a diabetic child can not only survive but may be guided through periods of intervening illness and changing life situations to what seems a normal adolescence. This requires continued and adequate medical supervision, and intelligent cooperation on the part of the patients and their parents. Although emphasis must be placed upon adequate medical treatment, physicians who have had experience with diabetic children have recognized that the ability to cooperate and follow the medical regime is connected with psychological factors.

The observations to be reported were made during the past two years on 21 diabetic children, 10 girls and 11 boys, who were patients at the Babies Hospital and the Pediatric Department of Vanderbilt Clinic. The children ranged in age from 4 to 14 years and had been sick from one to ten years. Their ages at the onset ranged from 14 months to 11.6 years. In slightly over half the children, diabetes developed before the age of 6—in two girls below the age of 2 years. A similar distribution at the age of onset was observed on a survey of the records of 76 diabetic children who had been patients at the Babies Hospital during the past ten years. Since diabetes is considered one of the illnesses with a strong hereditary influence, it may be of interest that in three-quarters of the group nothing whatsoever was known of the previous occurrence of the disease in the family, and in the remaining cases it occurred only occasionally in more remote members of the family who had become diabetic at an advanced age.

The study was made by repeated extensive interviews with the children themselves and different members of the family, especially the mothers, at the time of clinic visits. In some cases home visits were made also. The purpose of the study was to supplement the medical information by obtaining a general picture of family relationships and attitudes which affected the acceptance of the disease and the ability to carry out medical instructions. From a broader point of view, we were interested in how the requirements of so serious a disease affect the personality development of the child. To what extent can diabetic regulation be accomplished in a way that favors healthy psychological growth? This paper will report on some preliminary findings.

The first reaction of these families to the diagnosis had been that of great emotional disturbance and bewilderment. There was, however, a marked difference in the rapidity with which mothers assimilated their upset and learned the necessary techniques of management. At the time of this study, several years after the onset, in all but two cases the different families had accepted and integrated the disease, in a variety of ways. One might say that the way in which this integration took place was characteristic for the psychological atmosphere of the home. Common to all patients was the hope or expectation of complete cure after some time. Although most of these parents realized that this was at variance with medical opinion, their belief that there is a time limitation upon the disease may be a psychological necessity to enable them to submit to and cooperate in the strictly supervised regime which diabetes makes necessary.

Our inquiry aimed at obtaining as many details as possible about the way in which the different tasks were managed, such as adjustment to diet,

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** The Department of Pediatrics and Psychiatry, Coll. Phys. and Surgeons, Columbia University.

difficulties in giving the insulin injections, regularity of urine tests, and reaction to shocks, etc. Difficulties of the most amazing variety were brought to light, some of them previously unknown to the clinic, and on the basis of our experience we suggest that the time taken to elicit such information may be well spent.

On the question of diet, there is a difference of opinion as to whether a restricted and measured diet is really essential or whether one can give the patient more freedom in the choice of his food and compensate by adjusting insulin accordingly. At the Babies Hospital, after the period of initial standardization in the hospital, a diet is prescribed which is moderately restricted in total calories and carbohydrates. The different items are weighed and measured and the exact spacing of meals is necessary. This diet does not differ very much from the average diet, but it offers little variety, and food for special occasions, such as picnics and parties, has to be carefully planned. One of the hardships these children suffer if dietary restrictions are too rigid is the feeling of being different. In several cases it was the mothers who admitted that they were responsible for dietary "cheating," because they could not bear to see the child so deprived. One mother, in particular, showed the extent of her own conflict by tearful complaints that she could not manage on her ration stamps. In some cases, however, where there were authoritative mothers, the children accepted their restricted diet with marked docility. While this may have been good for the diabetes, it did not always seem to be good for the child.

Another point of medical discussion is the question of whether or not the absence of sugar in the urine specimens is an essential aspect of satisfactory regulation. From this study, one may conclude that the medical record is far from telling the complete story. Many children become quite adept at manipulating the diet and insulin a few days before the next visit to the clinic so that a "clean" specimen can be produced. Many children—or their mothers—mentioned spontaneously that they felt better when they had a positive sugar reaction. One adolescent girl who had had diabetes for ten years expressed the following paradox: She always knows when she is not doing well because then she feels happy and lively and full of energy. When she *is* doing well, that is, when the urine specimens are free of sugar, she is listless and tired and depressed. This girl was a great expert in having sugar-free urine at the time of clinic visits. Another girl, who is under erratic regulation, frequently breaks clinic appointments. She explained confidentially that when she has been "cheating" she does not test her urine at all since she knows she has sugar. Before that particular appointment, she had not tested her urine for three weeks.

The insulin injection is one of the hardest tasks of the disease. As one mother said, "It brings up all your emotions." Many parents and children said they would not mind diabetes so much if it were not for the needle. We obtained a good deal of material on injections, and the attitudes expressed lead us to believe that the psychological implications of the injections for both parent and child need to be taken into account in helping the patient manage the disease. One boy daily would lock himself into a room for a period of an hour and allow no one to come in. Several children felt paralyzed when they first tried to give themselves injections. Some reacted to injections as to a punitive attack by the mother. One boy in particular was a great problem. He refused to allow the injection to be given except in the buttocks, and he would lie on his stomach and swing from side to side when his mother tried to give the injection. No technical skill was of any use here. As the interviews with his aggressive mother amply disclosed, the problem was one of family relationships.

The degree of cooperation, or of difficulty, can be correlated with psychological factors in the family background. Direct questioning about emotional relationships was avoided because of the fact that such questions either arouse opposition in the patient or are answered evasively. "Tell me what you think about the disease—what have been the hardest things about it?" combined with an attitude of friendly interest which accepted the patient's point of view provided the kind of stimulus necessary to encourage the patient. Occasionally resistance was shown, but it was usually overcome. As a whole, this group of mothers was cooperative and articulate.

One focus of the inquiry was upon events preceding the onset of diabetes which might have been of traumatic significance, psychological or otherwise. In one-third of the cases diabetes developed at the time of a disturbance on family relationships, such as being boarded out with relatives, divorce, birth of a sibling, deaths within the family, etc. In no case had the parents connected these events with the onset of diabetes. In less than one-third colds, recurrent tonsillitis or other infections had preceded the onset. A period of school difficulties was mentioned twice. In two cases there had been falls shortly preceding the onset, one on the head and

the other on the abdomen. In the remaining cases no especial event around the time of onset could be recognized in retrospect. Although it would be unwarranted to assume from such evidence that these events have actually been of significance for the manifestation of the diabetes, there is sufficient evidence in existence today, showing the effect of emotional states on sugar metabolism, to warrant a more intensive study of this aspect of the problem, not in retrospect, but when diabetes is first diagnosed. Perhaps it should be noted also that even when no actual *event* of significance can be remembered, this does not preclude the possibility that in some cases children are exposed over a period of time to a traumatic family climate.

There was sometimes a wide discrepancy between what could be ascertained as factual events and what was presented by parents as their explanation of diabetes. In the theories which the mothers expressed, frightening experiences of all kinds, accidents and falls, or the shock of operations were commonly mentioned as having caused diabetes. Sometimes these events had happened several years before the onset, and usually were related to neglect or aggression on the part of some other person. A number of mothers blamed the occurrence of diabetes on difficulties which they had experienced during pregnancy with or delivery of the later diabetic child. One woman had always had a presentiment of misfortune for her child because she was born in May and named Mary. She had often heard her mother say all Mary's are born to suffer. Another woman said her boy kicked so hard during pregnancy that she knew she "was going to have a devil." This, parenthetically, was the child who swung from side to side when the injections were being given. This mother said she was bothered by "many aggravations" during pregnancy, as this was the time her husband was beginning to wander. Several times the onset was related to preceding illness, and some mothers would add the excusing remark that they had given the child the best of care; others would blame themselves, that they had overstuffed the ailing child and brought on the disease. In all these answers various mixtures of hostility and guilt could be seen. There is no reason, of course, to believe this is specific for diabetes. These attitudes may also appear in the mothers of children who have any serious chronic disease.

We inquired into this aspect of the disease in such detail because it seemed to us that these "theories" revealed characteristic attitudes of the mother toward the child, and the same may be said about the hopes and expectations which the parents held concerning possible cures. These ranged from "the Lord may do a miracle" or "another fall may cure her" to belief in the predictions of the ouija board and hopes for the child's outgrowing the disease at the time of puberty when there would be a "change." One mother exclaimed, "If she cannot be cured it would be better for her to die! She will never forgive me for letting her live." The mother of another girl told how, when her child was in a coma, she said to her husband, "Once and for all let her go." This child was the favorite of the father. As she came out of the coma, the girl said over and over, "Let me die."

Many families express a belief that a "cure" will come in some magic way as the just reward for good behavior, and they therefore do everything the doctor tells them. These parents use the threat of death, continued invalidism or being left at the hospital as punishment for dietary indiscretion. One mother who was especially rejecting of the child and neglectful in her care claimed that she was not worried, the child was so young she would outgrow it, she just could not believe it was as serious as people told her. Her lack of concern nearly led to the death of the child, who was sent away for the weekend without insulin and who did not dare to call her parents when she began to feel sick during the night because she had been trained not to bother them. This child is only just 5 years old. She developed diabetes within the last year, and her parents have not yet accepted the disease. At the outset, social service had difficulty in persuading them to buy the necessary equipment. Another mother, whose methods of handling might be described as an overpowering, perfectionistic manipulation of every aspect of the child's life, felt that more research should be done so that one day they would have a "nice, clean operation to cure diabetes" and *she* would be free of this curse and visitation. Another mother, who said she had had her diabetic child as a "comfort child" for one she had lost, suffered because this son was now damaged and asked whether she could not give her pancreas to her poor child. This mother was exceedingly neurotic and felt that everything that happened to her children was punishment for the sinful life of her own mother. The father of the child whom we considered most secure in her family stated that he knew that diabetes could not be cured but that "she might live a hundred years, only she must not have any operations or accidents."

The family attitude toward the diabetic child

showed great differences in individual cases. We have attempted a grouping, according to the way specific tasks of management were handled, and tried to correlate these attitudes to the regulation of the diabetes in the child. We could recognize three main types in which mothers expressed their attitude according to the degree of control they exercised in following the regime. The one which seems most desirable for the child, that of a tolerant, relaxed acceptance of the task, was least frequent. It was observed in only one or two instances. In one-quarter of the cases altogether, the attitude toward the child was not outwardly aggressive and punitive, although neurotic attitudes were expressed. Sometimes the mother boasted how exceptionally well she managed all these difficult tasks, which suggested that her attention was more upon herself than the child; sometimes she was excessively sorry for the child who had to eat the same food day in, day out. Regulation in these children seemed to be fairly satisfactory.

Quite distinct from this type of good cooperation is the perfectionistic overcontrol in which the handling of the diet, giving of injections, etc., all become expressions of the mother's absolute power to do the right thing. Here the basic attitude toward the child is aggressive and subduing. The mother's authoritarian attitude extends to every detail of living. We think especially of one tense 9-year-old boy whose life was hedged in with prohibitions. He was not even allowed to cross the street with the other boys but must wait until his mother permitted him to do so. With these mothers the sentence, "I will not stand for it" recurs frequently in discussing the family problems. The diabetes was one thing these mothers had to accept and the perfectionistic quality of their cooperation seemed an attempt to win a victory over it, regardless of the fact that the child's personality was being crushed in the process. Only three mothers were rated as representing the pure type of this attitude, but trends in this direction were encountered quite often. Overcontrol of the child was characteristically associated with satisfactory regulation of the diabetes, although gradual deterioration of the metabolic status may occur, as in the daughter of the most perfect mother who came to the clinic from time to time only to demonstrate her perfect handling of the situation and not to get advice.

All the situations we have described thus far in connection with mothers' attitudes give, on ordinary medical contact, the impression of good cooperation and pleasant family relationships. But a different focus and approach to the diabetic patient and his family may quickly reveal difficulties in the background as well as the psychological dangers of too rigid control.

The last and largest group is the one in which the patients' cooperation is either erratic or persistently poor, which in itself draws attention to disturbing psychological problems. These more obviously disturbed families might be classified in two main groups. The first are those in which the mother's attitude is one of self-pity with blame for the child—the diabetes is just one more of her, the mother's, misfortunes. "What have I done to deserve this?" is a characteristic attitude. The second group expresses an attitude of open rejection and hostility. The diabetes is one more of the child's undesirable and annoying traits. Only 3 of this group of 13 patients, over half the total group, were satisfactorily regulated at the time of study, 4 showed marked irregularities in the degree of regulation, and in 6 cases the regulation was unsatisfactory. It is in this group that defiance of parents, jealousy of siblings, constant nagging, and destructive anxiety enter in as interfering factors which prevent a child from consistently following a routine, and which also keep him in a constant state of emotional turmoil, thus exercising an influence on the sugar metabolism and course of the diabetes. Quite often a child uses the diabetes to gain otherwise denied advantages or to control the family by his failure to cooperate. In this class of markedly disturbed family relationships we find 5 of the 6 diabetic children had been obese before they became diabetic.

Throughout this study we compared our findings with observations which had previously been made on the psychological background of obese children. Our findings on obesity suggested that the life habits which lead to its development are the central aspect of a neurotic family constellation. In diabetes, the picture is much less uniform and, as far as our present observations go, not at all specific. Although certain personality features appear more frequently than others, we would hesitate to speak of a typical diabetic personality structure as one could do in obese children, nor is there a comparable recurrence of the same typical family constellation. One finds in many diabetic children a tendency to compulsive behavior and a certain putty-like submissiveness. Other children, however, fight back, although often they fight through a passive, sabotaging kind of behavior. To obtain valid information on the relation of the personality structure to diabetes, it will be necessary to study diabetic children before they have suffered from

the disease for any length of time, and compare them with other groups of children, especially those suffering from other serious chronic diseases in which the threat of death may also be used as a means of control.

SUMMARY

Psychological observations on a group of 21 diabetic children have suggested that the family's acceptance of the disease and the way in which the medical regime is followed are indices of the family relationships. In emotionally disturbed families poor cooperation becomes a center of existing conflicts, and is frequently associated with poor regulation. The ability to cooperate, however, does not mean the absence of neurotic conflicts. If a family is capable of following a restricted regime to the letter, this seems to be the expression of a repressive, perfectionistic attitude toward the child. A more lenient medical regime would help such families accept diabetes with less guilt and anxiety, and this, in turn, would offer the diabetic child a better opportunity for normal personality development.

THE LOW BACK PROBLEM *

BARBARA B. STIMSON, M.D., F.A.C.S.**

The problem of the patient with low back pain has been with the medical profession, I imagine, since our first great ancestor pulled himself from the four-footed to the upright position. The low back takes all the strain. It is one of our points of least resistance. It is like the poor—it is always with us. And I am afraid, very much like the poor, also, it is apt to be shoved away into a corner so that we will not be bothered by seeing it.

My first association with the psychosomatic low back problem came many years ago. Just after I had finished my internship, I was at a girls' camp as doctor. I was sitting peacefully in the camp infirmary one afternoon when one of the girls came running down to tell me that one of the campers had fallen on the hillside and was paralyzed from the waist down. Immediately through my mind rushed the picture of a fracture or dislocation of the dorsal or cervical vertebræ, and I dashed off to see the young lady. She had slipped and fallen on the path; just tripped and landed on a stone which had struck her in the middle of the back. On a rapid clinical examination it was obvious that there was no displacement of any of the vertebræ but she maintained that she was completely paralyzed from the waist down and could not get up. She was in tears, of course, badly frightened, and there she lay. I remembered, suddenly, a little of the girl's background. Her father was paralyzed because of an injury suffered in a riding accident many years before and could get around only on crutches and wheel chair. She had that picture in her mind, and she was sure she was paralyzed. Fortunately, I saw her within a few minutes of the time of injury, and after a little while I was able to persuade her that she could get up and could walk back to the camp. This was my first experience with psychosomatic medicine, and I have been very interested in watching its development through the years that have intervened.

During the war one saw many instances of low back pain with combined organic and functional backgrounds. I was privileged, while in the British Army, to be stationed in England in a military hospital that had a psychiatric wing combined with the regular medical and surgical wings so that we were able to work in conjunction with the psychiatrists on a good many of these problems. Patients with low back pain came routinely to the orthopedic division. The head of the medical department and the head of the psychiatric department were extremely able and intelligent men and were very cooperative in working together on the low back problem, because many cases belonged in no single department but presented features of all three.

I returned to this country to find that the low back problem was still in about the same state that it was when I had left four years before; if the patient had a proved orthopedic lesion such as a spondylolisthesis, a protrusion of the nucleus pulposus, or a compression fracture, he fitted well into the orthopedic or fracture clinics. But if he had a pain in the back with negative x-rays for these orthopedic lesions, medicine didn't want him, arthritis didn't want him, and he certainly didn't fit into the fracture or orthopedic clinics. There really was no place for him. This procedure of handling patients with low back pain did not seem right. As far as the patient was concerned, he or she still had a pain in the back, and no one seemed to be doing very much about it. At best, these patients were sent down to the physical therapy department for diathermy and massage three times a week, *ad infinitum*.

In a discussion of this problem with the hospital and the clinic authorities, it was decided to set up a combined clinic for the handling of low back pain. That clinic started in January of this year. The personnel of the clinic consists of a physician, a neurosurgeon, a member of the physical medicine department, a psychiatrist, a rheumatologist, and three members from the Fracture Service. These specialists meet once a week. The patients are referred to us by the appointment system, because we felt that if we were to do any good whatsoever, or learn anything about the problem, we could not run a mass production performance; therefore, new patients were limited to 10 a week, the old patients coming in after the new patients were seen.

We figured out a routine back examination so that all of us doing the examinations would have

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** Assistant Professor of Clinical Orthopedic Surgery, College of Physicians and Surgeons, Columbia University; Associate Attending Surgeon, Presbyterian Hospital and Vanderbilt Clinic, New York, N. Y.

points in common which could be easily summarized. A complete history was taken and a physical examination made with urinalysis, blood count, sedimentation rate, and, with the cooperation of the X-Ray Department, routine x-rays of the low back were taken not only in the antero-posterior and lateral positions but the lateral oblique positions as well. At the end of the afternoon a conference was held which included the head of the Radiology Department, and interesting cases were discussed and interesting and unusual x-rays were examined.

We have seen about 200 patients up to this time in this clinic. They were referred to us not only from the admitting clinic, but from the medical, arthritis, gynecologic, and the genito-urinary clinics. We thought it would be necessary to refer the patients to these clinics and that most of our patients would have to have genito-urinary or gynecologic consultations. Instead, we are finding the situation reversed. These clinics get the patients with the backaches and send them to us.

The diagnoses of these patients have fallen into most interesting categories. We have been in existence only four months; we have seen about 200 patients, and the analyses of these cases have not as yet been completed. Conclusions cannot be drawn on as few a number as this.

Of about 145 charts which I have analyzed the diagnoses have fallen into these groups:

Posture	27
Osteoarthritis	27
Neuropsychiatric	15
Congenital anomalies	15
Myositis and Fibrositis	13
Rheumatoid arthritis	4
Protrusion of disc	3
Miscellaneous	23
Cancer with metastases	
Spinal cord tumor	
Sickle cell anemia with infarct	
Nephroptosis, etc.	
Acute low backs	5
Diagnosis deferred	10
No low back diagnosis	2

The posture group consists quite largely of women who have borne one or more children, who have very weak abdominal muscles, and who have low backache at the end of the day. We find that we can do a great deal for this group, thanks to the cooperation of our physical medicine specialist who is present at every session of the clinic. Exercise, proper beds, etc., have done wonders, and these patients are already among our most grateful.

Some of the arthritic patients come in with x-rays which show marked osteoarthritic spurs, lists, and scoliosis. We are learning not to treat x-rays but patients. A nice woman, of about 52 years, came in to the clinic. She said she had a little pain in her back for the past four months. She had one of the most appalling x-rays of an osteoarthritic spine that I have ever seen, but she had had only a mild backache for the past four months. Other patients have a great series of symptoms, and x-rays which show only mild changes. We are finding that we can relieve the osteoarthritics, especially in the older age groups, with proper fitting girdles. A firm that makes supports here in the city has cooperated very well with us and the girdles can be quickly obtained.

The next group I call the neuropsychiatric. There are 15 in this group who have been picked up by our psychiatrist. Some have been treated by him by brief consultations in the clinic. Others have been referred to psychiatric clinics in their own neighborhoods or in the hospital. Of the 15 who fall into that group, all except one are under 40, and 7 are veterans. Two of them had psychiatric histories in the Army.

There have been 5 acute low backs, with the signs and symptoms familiar to all of us. The patient leans over to pick something up, tries to straighten up, has an acute, agonizing pain in the back, and walks into the clinic with a list, marked spasm of the muscles, and sometimes very little by x-ray to show the cause. We know what we can do to help those patients, but we don't know the diagnosis!—whether it is a slipping of an articular facet in the lumbar vertebræ, or whether it is a slight tearing of the insertion of the erector spinæ muscles. We know we can make them better by means of traction, by use of curare, by use of ethyl chloride spray. We can relax the spasm and send the patients away much more comfortable. That is the group with which we wish to do more, in the hope of finding a true diagnosis. Ten patients are still awaiting a diagnosis; and in 2, all low back symptoms cleared up without known cause before they reached the clinic.

These back cases require patience, understanding, and cooperation between all the various specialists here in the clinic to find out what is wrong with the patients and to start them on the road to a certain amount of comfort. These patients with the low backache want to be helped. It is a painful disease.

There are a few in the group who come in with a proved spondylolisthesis or with a pseudoarthrosis between the fifth lumbar and the first sacrum, who we do not treat. Those few are referred to an orthopedic hospital for spinal fusion with, probably, complete relief.

Those patients whose work-ups are essentially

negative except for one or two small things, and whose x-rays are essentially negative present the real problem. With the help of the physician, the psychiatrist and the physical medicine expert, we find that most people can be helped.

Our psychiatrist, who is an ex-serviceman, is our most valuable asset. As I have already stated, 7 of our patients are ex-servicemen with psychiatric problems. Many of these cases have a combined organic and functional difficulty, and both have to be coped with in order to help the patient. B having consultation available, including x-rays an laboratory findings in one clinic visit, we find w are able to offer the patient a wider understandin of the low back problem.

Our work is still in the experimental stage. W can draw no conclusions from this group of case but we hope that by the time we have seen our fir two or three thousand, we may be able to reac some conclusions on the problem of low back pain

THE TREATMENT OF TWO CASES OF BRONCHIAL ASTHMA WITH ELECTROSHOCK THERAPY

STANLEY COHEN, M.D.,* AND CHARLES S. HOLBROOK, M.D.**

Of the chronic diseases, bronchial asthma is one of the most notorious for its spontaneous remissions. Most often the physician is unable to explain the mechanism responsible for the remission; sometimes he at least observes the relationship of coincidental situations associated with remission.

If a reliable nonspecific method were available to induce remission, it would be a valuable asset in the management of these patients. Up to the present time we have no such means. The recent studies by French and Alexander (2) have shown the importance of emotional factors of certain dynamics in the precipitation of asthmatic attacks as well as the value of the psychoanalytic method of treatment in inducing remission. The demonstration that autonomic imbalance exists in certain allergics likewise indicates that nervous factors are important (1).

For these reasons we decided to study the effect of electroshock therapy on bronchial asthma. Godlowski (3) reported successful induction of remission in seven cases of allergic asthma by insulin shock. Remission lasted for five months to two and one-half years. He suggested the success of the treatment might be based on stimulation of the adrenal medulla with subsequent liberation of epinephrin. No indication is given in his protocols of the intensity or frequency of attacks prior to treatment other than the fact that they were of the "severe allergic type" which had lasted from a few weeks to a few years.

We were primarily interested in a nonspecific method of treating asthma *per se* rather than in approaching the problem from the psychiatric standpoint. Two patients were selected because they had 1) almost daily spells of asthma for the past six months and 2) they were hypersensitive to extrinsic offenders, as indicated by the existence of positive skin tests and an onset in childhood or young adult life. Both patients required epinephrin almost daily. The amount of irreversible changes in their chests was estimated in both cases as minimal. One patient presented anxiety, which apparently dated from the time her asthma became severe. The other had no overt evidence of neurosis. Both patients were women in their twenties.

* Director, Allergy Clinic, Hutchinson Memorial, Tulane University, and Allergy Clinic, Touro Infirmary, New Orleans, Louisiana.

** Professor, Clinical Psychiatry, Tulane University, New Orleans, Louisiana.

TREATMENT

Each patient was given two convulsions a week for a total of six, by the accepted method of electroshock therapy. No other medication was used, aside from epinephrin and aminophyllin to relieve attacks of asthma during the period of treatment or during a period of observation for four months following the treatment.

RESULTS

Both of these patients have developed an increase in the severity of their asthma as well as severe emotional disturbances. Patient 1, who obviously was anxious and tense before treatment, developed severe anxiety shortly after treatment as manifested by frequent crying spells, marked tremulousness, dilated pupils, sleeplessness, and fear of being left alone. Her asthma became more intense and refractory to the usual drugs. She was admitted to the hospital about thirty days after the completion of her electroshock therapy in status asthmaticus. A twenty-five day period of hospitalization failed to effect a disappearance of her asthma even though she was an extrinsic asthmatic with intensely positive scratch tests to environmental allergens, the type of asthma one expects to disappear on hospitalization. During this period of hospitalization she had frequent startle reactions while asleep. On one occasion they were noticed to appear every half-hour.

The second patient, in whom we noticed no overt anxiety before starting treatment, developed severe hysteria within a few days of completion of her shock treatment. She was brought in by her family unable to talk or walk, tremulous and perspiring profusely. The family stated she had been unable to sleep for the preceding few nights. As her hysteria improved she frequently made the statement that she would feel better if she could cry. Within the next thirty days she likewise was admitted to the hospital in severe status asthmaticus.

DISCUSSION

Anxiety is a frequent associate of bronchial asthma. The psychoanalytic studies of French and Alexander have shed light on the dynamics of anxiety in these cases. Acute fear of separation or estrangement from a mother or a mother-substitute was the most common psychogenic force in the precipitation of asthmatic attacks in their patients. It is interesting to note that Patient 2 complained frequently of her inability to cry although she felt as though she should. This situation preceded her hospitalization for status asthmaticus. The relationship between inhibition of crying and asthma has been reported as the "most specific emotional factor in the etiology of bronchial asthma" by the latter investigators. These findings are consistent with the general experience of electroshock therapy where anxiety is the predominating symptom. Such patients very commonly are made worse. This is perhaps the reason why our patients developed these symptoms.

CONCLUSIONS

1. Two female patients with extrinsic bronchial asthma were given six convulsions by the usual procedure of electroshock therapy over a period of three weeks.

2. Both were made worse as evidenced by marked emotional disturbances and an increase in the severity of their asthma.

3. From this brief experience we believe that electroshock therapy is contraindicated in bronchial asthma.

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NEXT ANNUAL MEETING IN ATLANTIC CITY

The Fifth Annual Meeting of the American Society for Research in Psychosomatic Problems will take place in Atlantic City on May 1 and 2, 1948. The Program Committee invites those who would like to present papers to submit abstracts not later than December 1, 1947. Three typewritten copies of the abstract should be sent to Dr. Carl A. L. Binger, 125 East 73rd Street, New York 21, N. Y. The abstract should include the object of the study, the methods used, and a summary of the findings. Papers on any medical problem studied from a psychosomatic point of view will be considered.

DR. CARL A. L. BINGER, *Chairman*

DR. FRANZ ALEXANDER — DR. SYDNEY G. MARGOLIN
DR. ROY R. GRINKER — DR. SIDNEY A. PORTIS
DR. M. RALPH KAUFMAN — DR. THOMAS A. C. RENNIE
DR. EDWARD WEISS

ABSTRACTS OF PERIODICAL LITERATURE

KOZOL, HARRY L.: *Pretraumatic personality and psychiatric sequelae of head injury.* Arch. Neurol. & Psychiat., **56**:245, 1946.

One hundred and one civilians with acute head injuries were studied with respect to their pre- and posttraumatic personalities and psychiatric symptoms. An attempt was made roughly to quantitate 60 characteristics including, for example, work record, aggressiveness, schizoid attitudes, fatigability, emotional stability, anxiety, insomnia, sex disturbances, dizziness, headache, and gastrointestinal disturbances. The patients were then grouped categorically as normals, psychoneurotics, psychopaths, or patients with personality variants.

It was found that in a number of patients neurotic symptoms appeared for the first time after head injury. Most psychologic changes appeared shortly after discharge from the hospital, and were maximal three to six weeks after discharge. Most were receding at the end of three months; 50 per cent were gone at six months; and 85 per cent had disappeared after a year. The psychoneurotics showed the greatest proportion of posttraumatic psychiatric symptoms. Next were those patients with personality variants; next, normals; and statistically the least were the psychopaths. There was no close correlation between the severity of the acute injury and the severity of the sequelae. There was high correlation between posttraumatic psychiatric sequelae and complicating psychosocial factors, such as continuing compensation, occupational and economic stresses, and marital difficulties.

In general, the development of posttraumatic psychiatric sequelae could not be correlated with any one particular cause or group of causes. There were usually multiple factors which required analysis in each specific case. (W. W. H., Jr.)

FISCHER, ALFRED E., AND DOLGER, HENRY: *Behavior and psychologic problems of young diabetic patients.* Arch. Int. Med., **78**:711, 1946.

Forty-three young patients, who had developed diabetes before the age of 12, were studied from ten to twenty years with emphasis on personal behavior and personality reactions to the disease. The bad effects of parental oversolicitude or resentment to the diabetic child was discussed. Many of the children lacked security and felt inferior in comparison to normal siblings at home and normal schoolmates. They often attempted to hide the fact of their diabetic condition but necessarily had different diets and types of exercise. In general, the influence of adolescence and maturity had a favorable effect on these early anxieties, but also brought with them new problems relating to marriage and having children. These were seen most clearly in the girls. During the war years however, the older boys faced the conflict of military service or of being "4-F."

The degree of personality change from the diabetes had no correlation with the age of onset or the severity of the disease. The older patients were encouraged to be self-reliant in the regulation of their own diets and insulin administration. It was felt that newer concepts in the management of diabetes, which allowed for a more liberal diet, and longer acting insulin, made patients' adjustments easier. In addition to the wellknown physical effects of hypoglycemia, irritability, erratic conduct, confusion, negativism, and violent outbursts were also described. Chronic hypoglycemic reactions were thought to lead in some cases to cerebral deterioration. In addition, transient neuroses and character disorders, and two psychoses in the course of the diabetes were described. The average intelligence level was similar to that of nondiabetic children of the same age. One of the most interesting observations was that many of the diabetics secured employment in food industries. (W. W. H., Jr.)

STERN, KARL, AND PRADOS, MIGUEL: *Personality studies in menopausal women.* Am. J. Psychiat., **103**:358, 1946.

Fifty out-patients diagnosed as suffering from menopausal syndrome on the basis of physical findings were examined psychiatrically. Menopause was present in 40 cases. All patients were of poor or marginal economic status. Patients primarily sent to a psychiatrist were not included.

Hot flushes were present in all cases. Headache, pelvic discomfort, and backache were present in 40 per cent. Forty-one patients complained of depression. This was usually combined with irritability.

There was no correlation of intensity of vasomotor symptoms with severity of emotional disturbance. Pelvic discomfort was found more often in those more dysphoric.

The patients' premorbid personality was essentially different from that described in involutional melancholia. The majority were emotionally warm and glad to talk.

Rorschach results showed general improvement, coarctation, and a characteristic manner of approach. Most of the cases showed more than five "neurotic signs." The results were compatible with the clinical impressions.

The clinical picture was "surprisingly uniform," constituted a characteristic disorder, and was clearly different from other mental disturbances occurring during the climacteric period. It was considered a reactive depression based on and accentuating a preexisting maladjustment; its "menopausal" character was due to added conversion symptoms. (L. P.)

DRAGSTEDT, LESTER R.: *Section of the vagus nerves to the stomach in the treatment of peptic ulcer.* Surg. Gynec. & Obstet., **83**, October, 1946.

Dragstedt discusses section of the vagus nerves to the stomach with its effect on hypermotility and hypersecretion in the treatment of peptic ulcer cases. He believes therapy should be directed toward reduction of the volume and acidity of the night stomach secretion, therefore the physiologic basis for vagus section is the finding that excessive secretion of the fasting stomach in ulcer patients is neurogenic in origin. At present, 90 patients have been operated on. Twelve patients followed over three years are still well, take no medication, and are under no dietary restrictions. Apparently regeneration of secretory fibres in the vagi has not yet occurred. Dragstedt feels that his findings support the concept of ulcer as a psychosomatic disease, and that while severing the nerves "prevents nervous tension of various kinds from affecting the stomach, it cannot be considered the final answer to the ulcer problem." He urges re-exploration of possibilities of psychotherapy with study of the volume and acidity of the continuous night secretion of gastric juice as an objective quantitative measure of the effect of the treatment. (M. L. M.)

LUDWIG, A. C., AND RANSON, S. W.: *A statistical follow-up of effectiveness of treatment of combat-induced psychiatric casualties.* Mil. Surgeon, **100**, No. 1, 1947.

Three hundred and sixteen cases of combat-induced psychiatric disorder that had been returned to full duty from Seventh Army Psychiatric Centers were followed up after one to three months to evaluate the effectiveness of the current methods of therapy. Of the total group, 84, or 26 per cent, were still present for duty, with a performance rating of "good" or "fair," at the time the survey was done. Sixty-five additional cases, or 20 per cent had stayed for thirty days or longer before leaving their units, and had received a performance rating other than "poor." A total of 149, or 47 per cent, had thus been useful to their units in combat after return from the hospital. The performance rating on return to full combat duty are analyzed by diagnostic categories. Some of the factors influencing the rates of return to duty from hospital of combat induced psychiatric casualties are discussed. (M. W. B.)

LEAVITT, HARRY C.: *Neuropsychiatric appraisal in an induction station.* Bull. U. S. Army M. Dept., VII, January, 1947.

Leavitt concludes that:

1. Since the neuropsychiatric interview at the induction station is short, it is usually not possible to elicit information sufficient to justify a definite nosologic formulation.

2. It is necessary only to appraise the relative extent to which pathologic anxiety has incapacitated the examinee in the past or may disable him in the future. This can be done in less than five minutes.

3. Symptoms of anxiety can be recognized by autonomic nervous system dysfunction; or as mental processes, such as phobias, obsessional-compulsive states, and anxiety dreams, or associated with constitutional psychopathic, prepsychotic and psychotic states, etc.

4. Establishment of rapport is not required since degree of morbid anxiety is evaluated from physical symptomatology.

5. A longitudinal medical history and a personality-profile study is the most advantageous method to determine which men will adjust to military service.

6. Aid from trained psychiatric social workers is necessary to detect the psychopathic personalities.

7. Malingering to avoid military service is uncommon but deceit practiced in order to be inducted is more frequent.

8. The volunteer is more prone to withhold detrimental information.

9. A questionnaire was used as an aid to the neuropsychiatric interview.

10. The best work is done by the examiner with longest training and experience as a specialist. (M. W. B.)

BLANK, ROBERT H.: *An aid in the training of neuropsychiatric ward officers.* Bull. U. S. Army M. Dept., VII, January, 1947.

The author discusses a teaching device found to be of value in the psychiatric teaching experience of the Mason General Hospital. A brief set of notes was developed, the purpose of which was to facilitate the development of psychotherapeutic attitudes in all the interpersonal relationships among hospital personnel and patients. The notes were found to be of value not only in the training of neuropsychiatric ward officers but also, in modified form, in the training of medical officers and other hospital personnel. (M. W. B.)

DAVIDSON, HENRY A.: *Orientation to psychosomatics.* Mil. Surgeon, **100**, No. 1, 1947.

Davidson, in a brief article, presents a clear, excellent orientation to the problem that we all pretend to see the "patient as a whole," yet we inevitably are impaled on the forms of the eternal dichotomy: organic versus functional. The doctor of medicine must understand and be able to manipulate the gross environmental pressures with which illness is associated. (M. W. B.)

DEUTSCH, FELIX: *The use of the psychosomatic concept in medicine.* Bull. Johns Hopkins Hosp., **80**:71, 1947.

The author, who was Freud's personal physician, states that he was influenced by Freud to undertake research in psychosomatic medicine. After reviewing the term, and its interpretation by Alexander, Cobb, Dunbar, Nolan Lewis, Weiss, and others, he presents his own definition: "Psychosomatic medicine is the systematized knowledge of how to study bodily processes which are fused and amalgamated with emo-

tional processes of the past and the present." "Associative anamnesis," as a method of approach, is described. Emotional conflicts in asthma, mucous colitis, rheumatoid arthritis, stomach ulcers, hypertension, and diabetes are briefly discussed, as well as theory of therapy. (M. L. M.)

COCKERILL, ELEANOR E.: *The use of the psychosomatic concept in social case work.* Bull. Johns Hopkins Hosp., **80**:86, 1947.

This paper stresses the value of knowledge of unconscious mechanisms, and the use of such knowledge in working with clients with psychosomatic illnesses. The social worker is not a competing member of the medical group, but an accessory. Advantages of the office interview by the social worker, as well as the home interview, at the invitation of the patient, are described. Cases are cited, and areas of particular usefulness of the social worker are delineated, *e. g.,* in working with diabetic patients. "The social case worker's task is that of helping the individual to make the best use that he can of himself and his potentialities within the social world of which he is a part." (M. L. M.)

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BOOK REVIEWS

RAPAPORT, DAVID: *Diagnostic Psychological Testing.* Volumes I and II. Chicago, Year Book Publishers, 1945 and 1946, 573 and 516 pp. $6.50 each.

Rapaport and his collaborators have embodied in this publication their experiences acquired with the use of what they call a "battery" of tests, *e. g.,* the Bellevue test, the Babcock test, the Sorting test, the Hanfmann-Kasanin test, the word association test, the Rorschach test, and the thematic apperception test, all applied to the same individual. Each of the tests is amply discussed, and special attention is paid to the meaning of each separate answer in the various tests. The authors point out that in interpreting the results of a test one should not be satisfied by merely calling an answer right or wrong. In their evaluation they also attempt to appreciate the way in which a given answer was produced.

In evaluation of all biologic data and especially of the results of psychologic tests it is always difficult to define exactly what should be considered as normal. The authors have endeavored to solve this problem by performing their tests on a control group of 50 persons who are presented as more or less normal. With respect to this some objection might be raised. One wonders if a number of 50 is large enough for this purpose. Furthermore, it would have been preferable to choose as normal controls persons out of more different environments. If this procedure had been followed, it seems doubtful if the authors would have encountered the same limited personality structure as they now found among the members of their normal control group.

The data obtained by the tests have been subjected to statistical analysis; they are represented in the form of "scatter diagrams." This exact method of presentation gives an excellent insight into the relative significance that should be attached to each separate part of a given test.

It is not practicable to discuss in the narrow space of this review all the minor points in which the reviewer differs in opinion with the authors. The reviewer highly appreciates the way in which the Rorschach test is treated in this presentation, but he regrets that the authors have not kept to the original interpretation of Rorschach in their evaluation of the "form answers." The reviewer fully agrees with the authors that more attention should be paid to the verbalization. The reviewer understands that they are somewhat suspicious of any attempts to explore the subconscious by an interpretation of the possible meaning of symbols that may come out explicitly or implicitly in the given answers. The reviewer feels, however, that it is in just this interpretation of symbols, if carried out with care and criticism, that possibilities are hidden for a further development of the Rorschach technique.

The authors give as their experience that "flower answers" and the like are given preferably by sensitive, delicate persons. This is not the experience of the reviewer, but this may be due to the fact that flowers are so abundant in Holland that a "flower answer" may be more common in this country than in the United States.

Extremely valuable material is contained in the Appendices I and II and in the summary of diagnostic findings, at the end of the chapters on the Rorschach test.

On reading this book one becomes impressed with the great diagnostic possibilities offered by the use of the "battery of tests" as described by Rapaport and his associates. This book is of great importance; it should be studied by every psychiatrist and clinical psychologist.

S. J. VLES

LAWTON, GEORGE: *Aging Successfully*. New York, Columbia University Press, 1946, 266 pp. $2.75.

It is always difficult for a professional man to write a popular exposition of a problem for the laity. His specialized erudition endows him with a vocabulary and directs his attention in the presentation of the problem to a phraseology that is often beyond the comprehension of the average reader. Lawton has sufficient experience and knowledge of such errors to be able to avoid them.

Early in his career, Lawton was a school psychologist. He learned that the problems of children generally develop out of their observation of their parents and grandparents beset with similar problems. He was thus influenced in 1936 to concentrate his attention on the problems of maturing and of aging. *Aging Successfully* is the result of these subsequent years of interest. While the author deals with the psyche rather than the soma, he makes a valuable contribution to psychosomatic medicine. His training causes him to limit wisely his discussion of emotional adjustments to the field of psychology and refrain from any attempt to offer suggestions for therapy of the mentally or physically ill. He is concerned with psychologic aging and has previously brought it to the attention of those interested in aging processes through his thoughtful editing of *New Goals for Old Age* and his courses in the Adult Extension Series of the Division of Social Philosophy, Cooper Union, New York. He does not pose as a therapist, but speaks of his activities as "old age counselling." He presents an optimistic philosophy of life and shows how to develop constructive and satisfying attitudes toward conflicts and frustrations. He defines his "counselling" as an attempt to apply what we know of human motivation, rehabilitation technics, and community resources to the problem of decreasing the "ebb" phases of the cycle and to increasing, no matter how long we live, the number of "forward movements," those wonderful movements of discovery and new learning. Any novelty that may be found in his book or in old age counselling, he attributes to the application to a hitherto unexplained field—middle and later maturity—of universally tested and accepted principles of clinical psychology, mental hygiene, education, vocational counselling, and rehabilitation.

This is a book to read slowly and thoughtfully, as it is detailed and otherwise an important paragraph may be missed. A careful scanning of the preface will allay many of the criticisms that might arise from confining the attention to the optimistic philosophy of the subsequent chapters. In his preface, Lawton points out the purpose and limitations of his book. It is not intended to be a learned analysis of the problems of growing older for students of the subject, but it is for people, men and women, who happen to be growing older.

The imperative need for such a book is summed up in the author's own words: "For the first time in human history what we are and what we do in old age has become important." In the time of Christ, the average life span was 25 years, while the life expectancy of a baby born today is about 60 years. Whereas once 38 per cent of a person's life was spent as a child, now only 27 per cent of it will be spent that way. We are informed that most children born at present will enjoy a complete middle maturity and about 15 per cent, or 27,000,000, will know a late maturity (over 60).

The author's optimism is well balanced with thought about the realities of aging. He appreciates there is no magic that can completely erase illness, infirmity, poverty, loneliness, frustration, or disaster, and adds that thought and effort must be put into the process to grow old sucessfully. He sets no specific age at which life begins, but confirms the opinions of those of the medical profession who have any special interest or experience with aging that it begins at birth, if not before. He states that the best time to prepare for old age is in childhood and the next best time is in the forties. He does not lose hope if we have reached the sixties without any real preparation. "It simply means that we have a longer job on our hands. But it is still possible for us to learn how to extract from the current years all they can offer and to prepare ourselves for the changes and problems that the seventies and even eighties will bring."

The author writes of his experience and contacts. "Certain older men and women have continued for years to be my living text books and source material." Many of his apt prose illustrations are attributed in footnotes to private communications. Other footnotes indicate he has read widely, and wisely applied what he has read to his old age counselling. He is a good bibliotherapist. He quotes from books that are not too deep or specialized for the lay reader. The busy professional man will wish he had included a bibliography and an index to facilitate more ready reference, but possibly such omissions are due to the author's more thoughtful consideration for the majority of his readers. Bibliographies and indexes give a certain pedantic and formal quality to a book that may lessen its enjoyment by members of the laity. The effect expended in browsing through its pages for information may enhance the value obtained.

The book's fifteen chapter-headings stimulate interest and are sufficiently informative to compensate for want of an index. They justify enumeration: "So you want to live long," "How old is old?" "Old age: minus and plus," "A woman grows older," "A man grows older," "In youth prepare for age," "Jobs after fifty," "Retire to, not from," "Love at maturity," "Can age and youth be friends?" "A philosophy for maturity," "A private talk with your older self," "To invite trouble after fifty," "A bill of rights for old age." and "You can't dem-

bilize senior America." The first thirteen chapters are in the nature of a conversation with the older man and woman on the most effective way of making the typical adjustments called for in later maturity. In the fourteenth chapter, "A bill of rights for old age," the author, through the clever symbolism of a radio address consisting of a synthesis of many actual remarks and sentiments often heard and overheard, allows old age to tell about itself and its reactions to the world in its own way. In the last chapter, "You can't demobilize senior America," Lawton speaks over the heads of old people to "society at large," telling society how to strengthen itself by strengthening later maturity: the 25,000,000 men and women in this country today over 50, of whom 12,000,000 are between 50 and 59, and 13,000,000 are over 60.

The earlier chapters confirm the teaching of psychosomatic medicine that the emotional adjustments which are important in adult life have their origin in childhood. The influence of grandparents in the rearing of their children's children is described and also the emotional conflicts that may arise between the three generations involved. The role of sex in the lives of older people is dealt with sanely and practically. Freud has adequately proven that there is no such thing as a sexless normal child. Lawton further supports the evidence offered by Cameron and Hamilton that there is no such thing as a sexless normal aging or senile person. The author also calls to our attentions how important it is for the hardworking business or professional man to plan in his early years for what he is going to retire to rather than to be continually looking forward to what he is going to retire from. Lawton stresses the necessity of always having an externalization of interest and of maintaining this interest in some constructive activity. The reviewer was specally impressed with the chapter, "A philosophy for maturity." The increasing spirituality which later maturity brings is here given due consideration. Religious dogma is carefully avoided and ways to express mystical experience in nonreligious phraseology are pointed out with the necessity for a liberal attitude toward all races, creeds, and people of whatever color. This is an important aspect of the problem of aging often overlooked by those who pride themselves on being scientific in their endeavors.

The value of *Aging Successfully* lies in its contribution to what Thewlis has so aptly termed "preclinical" psychosomatic medicine and psychiatry. It attempts to deal with normal or moderately well adjusted people and is prophylactic rather than curative. Lawton functions like the medical corps man in the front lines in time of war, or the industrial nurse in a large factory. His book may be looked upon as a first-aid kit for the aging person. It may be read by the psychologist, the physician, the psychiatrist, the gerontologist, the geriatrician, and the specialist in psychosomatic medicine, with profit. But it should also be read by educators, industrialists, clergymen, and lawyers, as well as the laity in general. It contains much that could be taught in high schools and colleges, and even Sunday Schools to better prepare the students for their interpersonal conflicts in the later decades of life.

The psychiatrist will feel compelled, however, to issue a word of warning. While worthy of favorable comment, this book is not a panacea nor necessarily a preventative to all of the troubles and tribulations of later years. Its effect upon the reader will depend on the personality of the latter. It will be of most value to the thinking extrovert, to the individual who thinks before he reacts to his feelings and is capable of an externalization of his interests. The author creates the impression that he may be classed as that type of individual and his psychology in turn makes the greatest impression upon a person with similar personality endowments. The person who is predominatingly introverted, who is sensitive, sensuous, and more of a feeling than a thinking type of individual may be made more definitely aware of the problems of aging and subjectively uncomfortable by reading this book. He will be informed how to adjust and compensate but feel that he lacks the resources and qualifications to do so, which are possessed by his thinking and more extroverted brother. Nevertheless, I can think of no greater harm resulting than his laying the book aside with a word of complaint.

Aging Successfully will not prevent arteriosclerosis nor senility. It is doubtful that it will prolong the life of the reader, although it may relieve some of the tension arising from the stresses and phobias conducive to hypertension, gastric ulcer, or other emotional induced syndromes. It will, however, enable many to develop further insight into their emotional life and to await the termination of their earthly existence with greater assurance and peace of mind.

EDWARD B. ALLEN

ENGLISH, O. S. AND PEARSON, G. H. J.: *Emotional Problems of Living.* New York, W. W. Norton and Company, 1945, 438 pp. $5.00.

In this book the authors have attempted to provide an account of the normal process of personality development from birth to old age, together with a review of the common psychologic problems associated with this process. This was an ambitious task which was not lightened by the authors' determination to write in simple, interesting, and as far as possible unscientific language. The point of view throughout is Freudian. The style is lucid and interesting. It is a much better book than the authors' previous book, *Common Neuroses of Children and Adults.*

The first seven chapters of the book are devoted to a discussion of the normal patterns of thinking, feeling, and acting demonstrated by the individual as he passes through the various psychosexual phases of his development. Each of these phases or periods of development are discussed separately in sequence beginning with the oral period and passing through the anal and phallic periods to the latent period. In addition, a clear description is provided of the more common emotional

problems and psychologic maladjustments which arise as a result of conflict and frustration in each of these periods. These problems are dealt with in an optimistic and constructive way, suggesting the sort of counsel and therapy which parents need in order to minimize the difficulty and prevent more serious pathology from arising.

In Chapters 8 and 9, which nominally deal with the emotional disturbances during the latent period, the book takes a more clinical turn. The diagnostic approach and some of the general considerations in connection with medical or psychiatric methods are discussed in order to make meaningful a simple classification of the psychologic illnesses of childhood. Then follows a description of the problems associated with personality development during puberty, adolescence, vocational adjustment, and finally marriage. Here, too, are provided sensible insights and suggestions which the practitioner or counsellor can pass on to parents or to the patient himself in order to prevent the onset of more malignant patterns of illness.

The last four chapters deal with the common neurotic syndromes encountered in adults and relate their genesis to warped or perverted psychosexual development in the early years. The last chapter deals in some detail with the technics of psychiatric therapy including a very short account of the psychoanalytic procedure itself. A detailed history outline consisting of some 112 items is included. A short section regarding the emotional disturbances that accompany organic illnesses concludes the book; to this reviewer, it seemed curiously out of place and decidedly an afterthought.

In a book designed to cover the field of normal psychosexual development as well as the commoner deviations, emotional disturbances, and neurotic syndromes, one is bound to encounter a certain amount of dogmatism. In an effort to keep the text simple and to avoid technical words, the authors seem to run into semantic difficulty. For instance, instincts are defined (page 22) as "psychic representations of somatic processes . . . a sensation lying somewhere between cellular metabolism and psychological feeling." A little later instincts are referred to as "energy that is released as a result of the life processes themselves, of the physiochemical processes of the body which release tension right from the onset of the first breath" (page 27).

There are many aspects of the developmental story which have been omitted or underemphasized, probably in the interests of brevity and simplicity. In an otherwise rather complete statement, for example, no mention is made of the importance of the biting and masticating activity which develops during the oral phase. The role of this phase of development as an expression of aggressive and destructive drives is well known.

Similarly, the problem of adolescent dependence on the mother figure, which became such an important factor in military psychiatry during the war, does not receive much attention. While the authors stress the importance of child-parent relationships throughout the book, the topic of parental overprotection and indulgence during puberty and adolescence is dismissed with a scant two pages.

In spite of these minor shortcomings, this book is an important contribution to the field of undergraduate and postgraduate psychiatric education. The reviewer has used this book successfully during the last term as a basic text in a course on Normal Personality Development given to student social workers. It can be recommended to medical students and students of psychology. It is most valuable for those students who have already established a background of knowledge in systematic psychology. It forms an excellent bridge between elementary courses in psychology and courses in psychiatry. It would be difficult reading for the average layman.

Key references are provided at the end of every chapter and there is a good index.

J. D. M. GRIFFIN

The Encyclopaedia of Psychology. Edited by Philip L. Harriman. New York, Philosophical Library, 1946, 897 pp. $10.00.

This truly monumental work of almost 900 pages is designed to serve as a source of reference in the form of an encyclopedia, to acquaint the psychologist with fields outside of his immediate special research object, and also to outline the change from traditional to contemporary psychology. Eighty psychologists, several psychiatrists, and a few psychoanalytically trained authors have contributed to this volume; this high number explains the multitude of opinions which sometimes culminates in contradictions. As may be expected, much space is given to academic psychology, test methods, and special animal experimentation.

Jung and Adler rate a special write-up, whereas Freud (or psychoanalysis) does not (there is one special article on *Experimental Psychoanalysis* by J. McV. Hunt). The Chapters about *Psychosomatic Medicine* (Bela Mittelmann) and on *Psychosexual Function in Woman* (Therese Benedek) are outstanding in their clarity, condensation, and wealth of information. Eva Ruth Balken writes about language and is also the author of the important and well written chapter on *Psychology and Contemporary Psychopathology.* The pages concerning *Psychoses* are quotations and condensations from S. H. Kraines' textbook.

Some of the other authors may be mentioned briefly: Alexandra Adler, who writes about her father; J. F. Brown, about *Genius;* Knight Dunlap, on *Religion;* Bruno Klopfer, on *Rorschach;* Erich Lindemann gives an admirable outline of the function of the *Autonomic Nervous System;* Margaret Mead on the *Cultural Approach to Personality;* and Florence B. Moreno presents a surprisingly inoffensive description of her husband's *Psychodramatics.* Many of the other authors will not be mentioned here because their contributions have little to offer to psychosomatic medicine.

The *Encyclopedia* is not easy to use as a source or as a text. The list of authors does not show their contribution; the articles themselves follow one another

alphabetically, and not in meaningful order of parts or chapters. The greatest defect of the book is the uneven quality of the bibliographies, ranging from no references to occasionally hundreds of titles.

Under Harriman's editorship, the book struggles hard to be just and objective toward the new advances in the great field of modern psychology; in this struggle itself, however, it is of only limited value.

MARTIN GROTJAHN

MORENO, J. L.: *Psychodrama.* New York, Beacon House, 1946, 429 pp. $6.00.

This book tends to summarize the work which the author has been doing since 1921 in the field of psychodrama. It contains papers previously printed in English, papers written in English but now out of print, papers which appeared in German and are translated for the first time, unpublished papers, psychodramatic protocols and documents showing the development of psychodrama from 1910 to 1945. Unfortunately, the editing of this document is such that there is a very marked repetition of contents from chapter to chapter.

The book is divided into 9 sections entitled as follows:

I. The Cradle of Psychodrama.
II. The Therapeutic Theatre.
III. Creative Evolution.
IV. Principles of Spontaneity.
V. Role Theory and Role Practice.
VI. Psychodrama.
VII. Psychomusic.
VIII. Sociodrama.
IX. Therapeutic Motion Pictures.

The author is very critical of psychoanalysis and of Freud, and he reports a conversation which he had with Dr. Freud on the single occasion on which these two men. He said to Freud: "Well, Dr. Freud, I start where you leave off. You meet people in the artificial setting of your office, I meet them on the streets and in their homes, in their natural surroundings. You analyze their dreams. I try to give them courage to dream again. *I teach the people how to play God.*"

The author states that the "Theatre for Spontaneity" became a gathering place of malcontents and psychologic rebels, the cradle of creative revolution, between 1922 and 1925, and the author claims:

"It is chiefly from there and from my book on the Theatre for Spontaneity that the inspiration for the use of play techniques, spontaneous play therapy, group psychotherapy and role training derived, methods which many psychoanalysts and educators have gradually assimilated into their work."

The author is critical of the concept of catharsis as taught by Breuer and Freud and states that he picked up the trend of thought where Aristotle left off, and writes:

"Breuer and Freud were ignorant of the psychotherapeutic implications of the drama milieu to which Aristotle had referred in 'De Poetica.' It remained for psychodrama to rediscover and treat the idea of catharsis in its relation to psychotherapy."

In this reviewer's opinion, the book is markedly repetitious, the proof reading is very poor, there are many grammatical errors and misspelled words. In the copy sent to the reviewer, many pages were missing. Many words such as "peripetie," "creaturgy," "creatocracy," and "ambicentric" appear which the reviewer was unable to find after consulting several standard dictionaries.

In spite of the criticisms mentioned above, one should not lose sight of the fact that Moreno has made a definite contribution to group therapy with the use of the spontaneity theatre. In his book he gives very interesting material concerning the treatment of marital problems and the treatment of musicians suffering from neuroses. He discusses the use of motion pictures and television and he recommends that organized psychodramatic sessions should be broadcast from a television station to the world. He claims that he has treated schizophrenic patients and manic-depressive patients with his psychodramatic technics and he claims that his technics are of value in examining criminals but, unfortunately, he does not give any data to substantiate these claims. From a psychosomatic standpoint this book contributes very little, in this reviewer's opinion.

In conclusion, this reviewer feels that the book contains certain material which is of interest and value to those doing group therapy. However, due to its length and repetitiveness, this reviewer feels that the busy reader would benefit as much from reading some of Dr. Moreno's shorter articles on this subject.

FRANK J. CURRAN

BOOK NOTES

WILLIAMS, ROGER J.: *The Human Frontier.* New York, Harcourt, Brace and Company, 1946, 314 pp. $3.00.

To build society on an understanding of man, Dr. Roger J. Williams would have us study every aspect of many people. This, he shows, would prove how unlike we are physically and chemically in substance and in process, and psychologically in sensation, thought, feeling, and expression.

It is so simply and clearly written that any layman can follow it if he knows or will look up a few necessary technical terms. Even when the wording is not as precise as a scientist might want, the author is right in the point he is making. The best chapters, II through VII, being the first half of the book, handle those dissimilarities of men, many native, a few acquired, with which every physician should be familiar; yet several of them were unknown to me. These chapters are on biochemistry, sensation, endocrines, and psychologic characteristics. The later chapters, on society, religion, education, marriage, criminology, leadership, employment, and international relations, are rather a hopeful forcast and a plea for tolerance based on an understanding of peculiarities than a precise statement of what they are. Among these chapters is one on heredity and

environment which probably falls short of what any one might hope to find, yet it makes one point which even the psychiatrist is apt to miss at times, namely, that many a trait which seems due to the life a man has led may have been built into him or he may have been so built that the life he did lead was somewhat foredoomed.

For a plan to study many men from all angles and for these stubborn facts of native differences between us, this book may be a useful fingerpost.

WARREN S. MCCULLOCH

BARKER, R. G., WRIGHT, B. A., AND GONICK, M. R.: *Adjustment to Physical Handicap and Illness: A Survey of the Social Psychology of Physique and Disability*. New York, Social Science Research Council, 1946, 372 pp. $2.00.

This volume may at first glance seem no more than a painstaking and conscientious study of the existing literature on a subject whose importance is constantly increasing. Even if this first impression were correct, the book would be a serious and valuable contribution: bibliography alone occupies 52 pages and most of the really important studies are not only mentioned but carefully analyzed and evaluated. The completeness of this bibliography is augmented by a number of non-English publications and an interesting survey of the problem of personality of the handicapped as reflected in many of the notable works of fiction.

The value of this publication however, goes far beyond the survey of literature. The authors contribute a great deal of personal observations and substantial theoretical reflections, all of them deserving of serious attention.

The five theoretical chapters deal with somatopsychic aspects of normal physical variations, with the personality of the crippled, the tubercular, the hard of hearing, and the social psychology of acute illness. The last practical chapter deals with the employment of the disabled, a problem displayed in its magnitude by the postwar period.

The general tenet of the volume is deeply critical. There is always a clear-cut differentiation between facts, observations,and well founded theories on the one hand and speculative approaches on the other. This critical analysis of the available material enables the authors to lay particular emphasis on the limitations of our present knowledge and to bring out sharply the pressing problems in this important field of psychosomatic research.

GUSTAV BYCHOWSKI

NIELSEN, J. M.: *Agnosia, Apraxia, Aphasia*. 2nd edition. New York, Paul B. Hoeber, 1946, 292 pp. $5.00.

This volume represents a revision and further elaboration of the first edition published in 1936. As suggested in the subtitle, the author has studied the subject of agnosic, apractic and aphasic disorders chiefly for their value as localizing signs.

An especially valuable addition is the chapter in which the author presents the detailed clinical and anatomical evidence to support his previous formulations about the aphasias. The illustrative material consists of case reports from the literature as well as cases studied by the author.

There is an excellent historical review of the subject, a full bibliography, and a much needed attempt to clarify the existing confused terminology. Neurologists will find this book very useful, not only for a better understanding of the aphasias, but also in the practical daily work of neurologic diagnosis and localization.

NORMAN A. LEVY

KITCHING, HOWARD: *Sex Problems of the Returned Veteran*. New York, Emerson Books, 1946, 124 pp. $1.50.

This book is meant as an adviser to the returning veteran and his wife to help them overcome the emotional after-effects of their separation and rebuild their marriage in full harmony. Written in clear and simple, non-technical language, dispensing with deeper analysis, the book has no scientific ambition and should be noted as a valuable contribution to a specific problem of mental hygiene of the postwar period.

GUSTAV BYCHOWSKI

MOTTRAM, VERNON HENRY: *The Physical Basis of Personality*. New York, Penguin Books, 1946, 126 pp. $.35.

This book is essentially a popular treatise on biology, which deals mainly with the elementary principles of genetics. It is written for the layman in nontechnical language and contains a description of the division of cells, the mechanism of sex determination, and the property of chromosomes. There are also chapters on the nervous system and endocrine organs. The book further purports to be an attempt to reconcile the biological and theological viewpoints regarding the reasons for the uniqueness of the individual.

It is written from the viewpoint of the elderly physiologist and amateur philosopher who frankly injects his prejudices into the text and attempts in the argument to rationalize them. The organization of the material is loose; the stype is discursive and pedantic, replete with literary allusions, asides, and statements ex cathedra. It is difficult to follow the thread of his reasoning through the welter of literary quotations and references, some of which appear to be inaccurately used. For example, he alludes to Casca instead of Cassius as the prototype of the thin man.

If there be specific new contributions to psychosomatics in the volume they have escaped the reviewer. The book is a reflective discourse on the Nature of Man in which excerpts from world literature take the place of experimental data.

STEWART WOLF

BOOKS RECEIVED

Anti-Semitism, A Social Disease. Edited by Ernst Simmel *et al.* New York, International Universities Press, 1946, 140 pp. $2.50.

Are You Considering Psychoanalysis? Edited by Karen Horney. New York, W. W. Norton and Company, 1946, 262 pp. $3.00.

ARTHUR, GRACE: *Tutoring as Therapy.* New York, The Commonwealth Fund, 1946, 125 pp. $1.50.

BLAU, ABRAM: *The Master Hand.* New York, American Orthopsychiatric Association, 1946, 206 pp.

Conference on Diagnosis in Sterility, 1945. Edited by Earl T. Engle. Springfield, Illinois, C. C. Thomas, 1946, 237 pp. $5.00.

FREUD, ANNA: *The Ego and Mechanisms of Defense.* New York, International Universities Press, 1946, 196 pp. $4.00.

GUTTMACHER, ALAN F.: *The Story of Human Birth.* New York, Penguin Books, 1947, 214 pp. $.25.

HOLMES, GORDON: *Introduction to Clinical Neurology.* Baltimore, Williams and Wilkins, 1946, 183 pp. $4.00.

JELLINEK, E. M.: *Phases in the Drinking History of Alcoholics.* New Haven, Hillhouse Press, 1946, 88 pp. $1.00 paper.

LANDIS, CARNEY, AND BOLLES, M. M.: *Textbook of Abnormal Psychology* New York, Macmillan, 1946, 588 pp. $4.50.

NOYES, ARTHUR PERCY, AND HAYDON, EDITH M.: *Textbook of Psychiatric Nursing.* 4th edition. New York, Macmillan, 1946, 405 pp. $3.00.

RANSON, S. W., AND CLARK, S. L.: *The Anatomy of the Nervous System.* 8th edition. Philadelphia, W. B. Saunders, 1947, 532 pp. $6.50.

RICE, THURMAN: *Sex, Marriage and Family.* Philadelphia, J. B. Lippincott, 1946, $2.50.

RYAN, EDWARD J.: *Psychobiologic Foundations in Dentistry.* Springfield, Illinois, C. C. Thomas, 1946, 131 pp. $3.00.

WOLFF, WERNER: *The Personality of the Preschool Child.* New York, Grune and Stratton, 1946, 350 pp. $5.00.

WORTIS, HERMAN *et al: Studies of Compulsive Drinkers.* New Haven, Hillhouse Press, 1946, 90 pp. $1.00.